The Milroy Lectures

ON

QUARANTINE.

Delivered at the Royal College of Physicians of London on March 11th, 16th, and 18th, 1897,

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LECTURE II.[1]

Delivered on March 16th.

MR. PRESIDENT AND GENTLEMEN,—In my first lecture the important report of the Social Science Quarantine Committee in 1861 was referred to and a summary of its conclusions quoted. The evidence that was then collected was not allowed to remain long unutilised. In 1868 a powerful deputation of the medical profession presented a memorial to the Privy Council in which they urged that the subject of quarantine had for the last twenty years been under the notice of the public, and that the present system had utterly failed during its trial in 1831–32, and had moreover been productive of serious inconvenience and distress, especially to the lower classes; that the General Board of Health had already recommended the substitution of sanitary precautions for quarantine; that the International Conference of 1851 had proved abortive in consequence of the serious difference of opinion among its members; that the experiment of superseding quarantine had already been tried in 1852, when mail steamers arriving which had had yellow fever on board during the voyage were admitted to pratique after removal of sick and disinfection of vessel; that again during the Crimean War quarantine had been almost everywhere superseded; that when in 1857 an outbreak of malignant fever occurred at Bengazi on the north coast of Africa, and freedom of intercourse was interrupted for two months by quarantine, the disease did not spread in that place and rapidly ceased upon the adoption of sanitary measures; that cholera in 1865 produced such an impression that the Conference of 1866 was initiated, and after a lengthy sitting resulted in a report condemning lengthy quarantine and recommending the substitution of a system of lazarets and health police at all ports; that at no period had the restrictive measures against cholera been so rigorously carried out as during the last two years and a half, and these having been recently applied to mail steamers it was desirable that the public should be informed as to the reason for such adoption; that quarantine had been stated in Parliament to be resorted to by this country not on medical or public health grounds, but solely for commercial purposes to meet the requirements of foreign Powers; that much of the uncertainty and obscurity surrounding the subject arose from want of evidence, no committee having considered the question since 1824; and that, inasmuch as no country was or could be so deeply interested as England on account of the magnitude of her commercial relations with all parts of the world, and as undoubtedly a well considered expression of opinion from this country after a searching investigation could not fail to have great weight with other States, and would eventually lead to the universal adoption of a more rational system, they urged that a thorough and exhaustive inquiry should be made by means of a Royal Commission.

The next International Conference, held in Constantinople in 1866, came to the conclusion that cholera always had its origin in India, and its extension simply followed the lines of human intercourse, being carried chiefly by means of the infected evacuations, and spread freely only in places where the sanitary condition was bad, but that it might also be conveyed by means of clothes, vessels, and houses. They were of opinion that a rational maritime quarantine was capable of arresting the disease. Such quarantine should be either quarantine of observation or quarantine of rigour.[2] Strict quarantine was to be applied to (1) all ships from an infected port with a foul bill of health; and (2) any vessel which had had cases on board during the voyage, although provided with a clean bill. The term of strict quarantine for persons was fixed at ten days to commence from the time of entering the lazaret, to recommence if any case occurred thereafter. It was further decided that any person suffering from diarrhœa should be detained at the end of the full period until the non-choleraic nature of the disease was proved by the medical officer. It was, however, agreed that in the case of vessels carrying surgeons and complying with certain formalities, which had had no cholera or choleraic diarrhœa on the voyage, the time spent on such voyage might be taken into account, and that twenty-four hours' surveillance might be deemed sufficient. Thus, if the voyage had occupied twenty-four hours nine days of observation were necessary, but if the voyage extended to nine days only twenty-four hours of observation were required. Merchant vessels not carrying surgeons, if they had been at sea fifteen days without any cases, were to be allowed pratique after five days of observation. In the case of emigrant ships with cholera on board the limit of quarantine might be extended to any time that the local authority deemed necessary.

In 1873, so far as cholera was concerned, quarantine was officially abandoned in this country, and medical inspection substituted by an Order of the Local Government Board. This Order required that every vessel found by Her Majesty's Customs to be infected[3] with or suspected of cholera on arrival should be detained and reported to the medical officer of health of the port. Such medical officer on visiting the vessel, if he found the vessel to be so infected, had authority to order her to moor or anchor at a specified spot. Every person on board was to be medically inspected; those found healthy were to be allowed to land, and the sick removed to hospital, or if too ill detained under treatment on board. The master, under the directions of the medical officer of health, was to disinfect the vessel and to disinfect or destroy as directed any articles of clothing. The penalty for refusing to obey or carry out any of the regulations rendered the offender liable to a penalty of £50.

In 1874 another International Conference was held at Vienna, the object being "to arrange among the Powers interested compulsory regulations having as their object to bring about a perfect uniformity in the measures to be adopted against the common danger," and also to consider as to the advisability of establishing a permanent or temporary International Sanitary Commission. Twenty European States were represented, also Persia and Egypt. This Conference re-affirmed the decisions arrived at in Constantinople that cholera originated in India, that it was transmissible by human agency, and that it might be conveyed from an infected place by means of clothing which had been worn, and especially by such as had belonged to persons suffering from cholera. They unanimously decided that the disease could be conveyed by fluids, especially by water. There was a want of unanimity on the question of danger of infection from merchandise. The incubation period of cholera was fixed at a few days—a week at the outside. As to quarantine a resolution of a committee (appointed to consider the question) to the effect that when cholera had broken through the chief points of interruption quarantines in the ports of continental Europe were useless, inasmuch as land communications deprived them of all their value, was carried by a majority of twelve to eight only. In the majority were Great Britain, Germany, Russia, Austria-Hungary, and Italy, France being the only Power of the first rank among the minority. The next resolution of the committee—"Under these circumstances it is necessary to establish in the ports of Europe, instead of quarantine, a rigorous sanitary inspection of every vessel coming from an infected port in accordance with the following regulation," was also adopted. This

[1] Lecture I. appeared in THE LANCET of March 13th, 1897.

[2] Quarantine of observation was to consist of keeping isolated and under observation for an indefinite period to be fixed by the local authority a vessel with crew and passengers, with free ventilation but no disinfection. Strict quarantine was defined as the isolation for a fixed time of a ship and persons on board, with disinfection of all that might contain the germs of the disease. The whole of the cargo was to be landed, and the passengers disembarked at a lazaret.

[3] A vessel shall be deemed to be infected with cholera in which there is or has been during the voyage or during the stay of such ship in a foreign port in the course of such voyage any case of cholera.

regulation was to the effect that local sanitary authorities at every port were to be kept informed respecting cholera in other ports. Immediate free pratique was to be given to all vessels from non-infected ports which had had no communication with any infected ship or port and which had had no case of cholera on board. It also provided for the medical inspection of all vessels from infected or suspected ports and also of vessels which, though coming from non-infected ports, had communicated with infected ports or ships during the voyage or which had cases on board. Immediate pratique was to be given if there were no actual cholera on board, unless there had been cases, in which event the ship itself, the crew, passengers, their clothes and goods, were to undergo disinfection before pratique was granted. If any cases were found on board, they were to be removed to hospital, the crew and passengers (healthy) disinfected and also the vessel itself. Free pratique was to be given to all merchandise except rags and susceptible objects. As, however, some of the States (eight having voted against the abolition of quarantine) would not accept medical inspection, and as there was a possibility of improving the system without actually abolishing it, a *règlement quarantenaire* was adopted for the benefit of such Powers. Vessels arriving from infected ports were to submit to observation for a period varying from one to seven days, and in exceptional cases this might be extended to ten days. If the voyage had lasted seven days without any case on board, the detention was to be for twenty-four hours only, in other cases from three to seven days, according to circumstances, dating from time of medical inspection. In such cases, if the vessel were in good sanitary condition, the quarantine could be performed on board and the unloading of the ship was not compulsory. If there were or had been any cholera or suspected cholera on board, the term of quarantine for healthy persons was to last the full seven days, to date from time of admission into the lazaret, the sick to be landed and isolated from the healthy. The ship and all susceptible objects were to be submitted to rigorous disinfection, after which those persons who had remained on board were to undergo seven days' observation. For vessels arriving from suspected ports (which were defined as those adjacent to or having free intercourse with infected ports) the duration of quarantine was not to exceed five days. Vessels carrying emigrants or pilgrims were to be dealt with by special rules to be made by each port authority according to its own discretion. Thus for the first time was medical inspection formally adopted in the place of quarantine by a majority of European Powers, and in the case of those who still clung to the old system some important modifications were adopted. While, however, so large a minority refused to accept the decision of the majority it was obvious that but little could be accomplished.

In 1883 regulations were again issued by the Local Government Board for dealing with cholera, and these contained several new and important modifications from the Order of 1873. The duty in the first place of deciding as to the state of health of the vessel on arrival devolved, as heretofore, upon the officers of H.M. Customs, and the subsequent treatment of any vessel found to be infected upon the port sanitary authority. Independent authority was, however, given to the medical officer of health to visit and examine any vessel from an infected port whether she had previously been visited by the Customs or not, and a form of certificate was given by the medical officer to use in any case in which he had reason to believe a vessel was infected within the meaning of the Order. On the delivery of this certificate the vessel was entirely under the control of the medical officer of health.

In 1890 regulations were again issued and power given to the medical officer of health to require in the case of an infected vessel (defined in the Order as a vessel in which there is or has been during the voyage or during the stay of such ship in a port in the course of such voyage any case of cholera) the names and addresses of all passengers on board who were found on medical inspection to be healthy, before they were allowed to leave. By forwarding such names and addresses to the sanitary authority of the district to which they were about to proceed, it was placed in the power of each district by timely notice of such arrival to protect itself by keeping such persons under observation so long as deemed advisable.

In 1893 was held at Dresden the last International Sanitary Congress, at which were represented Germany, Austria-Hungary, Belgium, Denmark, Spain, France, Great Britain, Greece, Italy, Luxemburg, Montenegro, the Netherlands, Portugal, Roumania, Russia, Servia, Sweden and Norway, Switzerland, and Turkey. England was professionally represented by Dr. Thorne Thorne, the medical officer of the Local Government Board, to whose able advocacy of medical inspection as a substitute for quarantine the Conference in a great measure owes its successful results. Three committees were appointed, the first to deal with the duties of a Government when cholera appeared in a country, the second to deal with the measures necessary to prevent cholera entering a country or spreading from one part of a country to another, while the third devoted itself to the Danube traffic. The Convention was finally signed by the delegates of Germany, Austria-Hungary, Belgium, France, Great Britain, Russia, Switzerland, Luxemburg, Montenegro, and the Netherlands. This Convention was of such an important nature, and will of necessity exercise so powerful an influence upon all sanitary regulations of this country, that its chief provisions must be quoted. The Convention will last for five years from the date of ratification. It will be renewed every five years by tacit consent unless renounced by one of the high contracting parties six months before the expiration of this term. Such renunciation will affect only those countries which shall have notified. The Convention will remain in force for the other States. The high contracting parties also reserve the right to make, by means of diplomatic negotiations, such modifications as they may judge necessary to introduce into the Convention.

MEASURES INTENDED TO KEEP ALL THE GOVERNMENTS WHO HAVE SIGNED INFORMED AS TO THE PROGRESS OF AN EPIDEMIC OF CHOLERA; AND ALSO THE MEANS EMPLOYED TO PREVENT ITS PROPAGATION AND IMPORTATION INTO HEALTHY PLACES.

The Government of the infected country is to notify to other Governments the existence of a cholera centre (*foyer*). This measure is essential. This will have no real value unless the notifying Government is itself warned of actual and suspected cases of cholera occurring within its territory. It will not, therefore, be necessary to recommend to the various Governments the compulsory notification of cholera by medical men. The object of the notification will be the starting point of a cholera centre, the date of outbreak, the place where it has appeared, the number of cases reported, and the number of deaths. Isolated cases will not necessarily be notified. The notification will be made to the diplomatic or consular agencies in the capital of the infected country. For those countries which are not represented there the notification will be made by telegraph to their Governments. This first notification will be followed by later communications at regular intervals of not less than a week, so as to keep the Governments informed as to the progress of the epidemic. Information as to the appearance and progress of the epidemic will be as complete as possible, especially indicating the steps taken to prevent the spread. It will point out the prophylactic measures (1) for sanitary inspection or medical inspection; (2) for isolation; and (3) for disinfection and precautions taken with regard to ships and the exportation of goods liable to carry infection. It is understood that neighbouring countries reserve the right to make special arrangements for organising a system of direct communication between the administrative officers on their frontiers. The Government of each State shall at once publish the measures it finds necessary to prescribe with reference to goods coming from an infected country or district, and also the cessation of such.

Conditions under which a district is to be considered "infected."—Every district is to be considered as infected when an outbreak of cholera has been officially declared. It will cease to be considered as infected if there has been no death and no fresh case for five days, provided that the necessary system of disinfection shall have been carried out from the commencement of the outbreak. Isolated cases will not render a district infected.

Necessity for limiting to infected districts the measures intended to prevent the spread of the epidemic.—The Governments should apply restrictive measures only to goods coming from infected districts. But this limitation should only be accepted on the distinct understanding that the Government of the infected country takes steps to prevent the exportation of dangerous goods coming from the infected district. When a district is infected no restrictive measures shall be taken with respect to goods which shall have left it at least five days before the outbreak of the epidemic.

MERCHANDISE, OR ARTICLES LIKELY TO CONVEY INFECTION, CONSIDERED FROM THE POINTS OF VIEW OF PROHIBITION OF TRANSIT AND DISINFECTION.

Importation and transit.—The only articles which can be prohibited are:—1. Body linen, clothes, and garments that have been worn (effects in use); beds which have been used. When these articles are carried as luggage or by reason of change of domicile they come under special regulations. 2. Rags and worn-out clothes. The following ought not to be prohibited: (*a*) rags compressed by hydraulic pressure, which are carried as merchandise in bulk in bales hooped with iron, and bearing marks and numbers of origin accepted by the authority of the country of destination; and (*b*) new pieces coming direct from cotton, woollen, clothing, or bleaching factories, artificial wools (Kunstwolle, shoddy), and cuttings of new paper. The transit of merchandise or susceptible articles packed in such a way that they cannot be handled *en route* should not be forbidden. When goods or susceptible articles are transported in such a way that while in transit they cannot come in contact with soiled articles their passage through an infected district should not be an obstacle to their entry into the country of destination. No goods will be prohibited from entry if it be proved that they were sent off five days before the outbreak. Goods must not be detained in quarantine on the frontier. Prohibition pure and simple or disinfection are the only measures that can be taken.

Disinfection.—Baggage: Disinfection will be compulsory for dirty linen, clothes, and garments which form part of baggage or furniture coming from a district declared infected. Merchandise: Disinfection will only be carried out for goods and articles which the local sanitary authority shall consider as infected or those the importation of which can be forbidden. The authority of the country of destination shall fix the method and place of disinfection. Disinfection shall be carried out so as to cause as little damage as possible. Letters and correspondence, printed matter, books, journals, and business documents (except parcel-post packages) will not be disinfected or restricted in any way.

MARITIME MEASURES.—PORTS.

A vessel which has cholera on board or has had a fresh case within seven days is to be considered as infected. A vessel which has had cholera on board on leaving or during the voyage, but no fresh case within seven days, will be considered suspected. A vessel coming from an infected port which has had no death or case of cholera on board before arrival, during the voyage, or on arrival, will be considered healthy.

Infected ships are treated as follows: (1) The sick are at once removed and isolated; (2) other persons are to be also landed, if possible, and submitted to observation, the duration of which shall vary according to the sanitary condition of the ship and length of the voyage, but will in no case exceed five days; and (3) dirty linen, effects in use, and articles belonging to the crew and passengers which in the opinion of the local sanitary authority are considered infected will be disinfected, as also the vessel or only that part infected.

Suspected ships are submitted to the following treatment: (1) Medical inspection; (2) disinfection—soiled linen, clothing in use, and articles belonging to the crew and passengers which in the opinion of the local sanitary authority are infected will be disinfected; and (3) bilge water will be pumped out after disinfection and good drinking-water substituted for that stored on board. It is advised to submit the crew and passengers to surveillance from a health point of view for five days from the date of arrival. It is also advised that the cargo be discharged quickly.

Healthy ships will be admitted to free pratique whatever the nature of their bill of health. The only measures which the local sanitary authority can apply to them are those applicable to suspected ships—viz., medical inspection, disinfection, emptying bilges, and substitution of water. It is advised to keep the crew and passengers under supervision for a period of five days, reckoned from the date of leaving an infected port. It is understood that the competent authority of the port of arrival can always demand a certificate stating that there has been no case of cholera on board the ship at the port of departure. The competent authority of the port will take into consideration in carrying out these measures the presence of a surgeon and disinfecting apparatus on board vessels of the three above named classes. Special measures may be taken in the case of crowded ships, especially ships carrying emigrants or any vessels in a bad sanitary condition. Goods coming by sea can only be treated as regards disinfection and prohibition in the same way as goods carried by land.

Any vessel which is unwilling to submit to the obligations imposed by the authority of the port will be at liberty to put out to sea. She will be allowed to discharge her cargo after the necessary precautions have been taken: (1) Isolation of the ship, crew, and passengers; (2) emptying of bilge water after disinfection; and (3) substitution of good drinking water for that stored on board. She will also be allowed to disembark those passengers who desire to go on shore, on condition that they submit to the measures prescribed by the local authority.

Every country shall provide at least one port on the shore of each of its seas with arrangements sufficient to receive a ship whatever its health condition may be. Coasting vessels will be the object of a special regulation to be established between the countries interested.

Although the agreement arrived at does not establish a perfect system, it marks a prodigious advance, and it must not be forgotten that there were great difficulties to be overcome and many prejudices to combat, which could only be met by concession whenever possible without sacrificing the broad general principles involved. The keeping under observation of healthy persons arriving in healthy ships was thus agreed to by Great Britain on the distinct understanding that this in her case would not involve any actual detention, but would be covered by the forwarding of the name and address to the sanitary authorities of the district to which they were about to proceed. Shortly after this Protocol had been signed a Bill was prepared to abolish quarantine in this country, but owing to the change of Government and various other difficulties it was not until September, 1896, that the Public Health Act became law.

By this Act the powers of the Privy Council to deal with cholera, yellow fever, and plague were transferred to the Local Government Board, who were thereby empowered to make regulations for the various sanitary authorities concerned. These regulations now in force practically extend the cholera regulations, with certain modifications, to these three diseases. If a vessel is found to be infected by the officer of Customs, she is reported to the medical officer of health, who detains her and deals with her at his discretion. He has, moreover, the power of boarding any vessel for the purpose of ascertaining whether she is so infected without the previous intervention of the Customs authorities.

Thus for Great Britain quarantine has been formally abolished, and our protection henceforth against the importation of infectious disease will be medical inspection, without any vexatious detention of a healthy vessel merely because she has arrived from an infected port. This, shortly, has been the history of quarantine in this country, and it now remains for time and experience to demonstrate to other countries the value of our system in order to induce them to accept the same conclusions. With many this will be readily brought about, while others will have more difficulty in arriving at the same opinions.

Having thus sketched the history of quarantine in this country and its final supersession by medical inspection it is necessary to inquire somewhat into the causes which have gradually led to its abandonment. The chief of these are: (1) That the system of quarantine was based upon a theory which is no longer tenable; (2) that when carried out as strictly as possible it has not had the effect of arresting the importation of disease; (3) that it has never been found possible to maintain quarantine absolutely, and that consequently a country practising it has been subjected to a barbarous, unnecessary, and costly system, without even the satisfaction of knowing that the experiment was complete; and (4) that sanitation and a rational system of medical inspection have proved more efficacious and at the same time less burdensome.

1. That the system of quarantine was based upon an untenable theory. In the early days of quarantine the idea of contagion was scarcely considered, inasmuch as diseases were looked upon as of Divine origin and represented the punishment by a higher authority for some special sin. The whole theory of modern quarantine, however, rests upon an assumption that certain diseases are conveyed by contact and by contact alone. Obviously if this assumption were capable of proof there would be a strong theoretical case for its adoption, though the practical test would still have to be rigidly

applied. In the fifteenth century the idea of contagion was attracting much attention, and as the transmissibility of disease from one individual to another became more and more clearly proved it was not unnaturally assumed that this was the only manner in which such transmission could be effected. Medical science was then, however at a low standard, and the methods of inquiry into the nature and causes of disease were unscientific and uncertain. It undoubtedly was a great stride to have passed from the supernatural idea of epidemic diseases and to recognise in any degree the influence of human agency. Inasmuch as plague was the only disease against which quarantine was at first instituted (and was for a long time so limited) on account of its supposed spread by contact alone, as other diseases came to be considered as contagious the system was as a matter of course extended to them. There is a certain amount of reason in the principle underlying the whole question—viz., that persons suffering from certain diseases may under certain specified conditions be the means of communicating the disease to other individuals, but here the rationale stops. The medical profession[4] at that time taught that the method of propagation of disease was not only by inhalation of the breath or effluvia from a sick person, but by absorption of the virus into the system through the skin, consequent upon direct contact. Hence it was that we read of physicians having recourse to complete oilskin dresses during epidemics, with the object of protecting themselves from coming in contact with infected persons, and it was "on this hypothetical extravagance that quarantine legislation was based, to the no small discredit of medical science, the misleading of governments, and serious damage to private and public interests."

One of the striking characters of the plague has been its sudden origin and development in various places in the East quite independently of any apparent connexion with its previous appearance in the same or other localities. So firmly, however, was the theory of contagion implanted in men's minds that the most extravagant and fanciful causes for the origin of an outbreak were accepted rather than any admission should be made as to the possibility of its arising in any other way. Thus, Dr. Bowring mentions a case in Egypt where, a contagionist having shut himself up in his house for protection and having died from plague, the explanation given was that his son had flown a kite from his window and that the kite had come in contact with a bird flying from an infected part of the city. In another case the entrance of disease into a strictly quarantined house was stated to have been due to a cat which had been seen on a basket of clothes returning from the laundry, these clothes having probably belonged to some person who had had plague; while M. Lamont, a writer on plague at the beginning of the century, attributed its introduction into Leghorn to a mummy which after twenty centuries of interment was unrolled in that city. Thus, again, in Malta, in 1813,[5] the outbreak was very generally attributed to the theft by a smuggler of a bale of cotton from a vessel which had arrived from Alexandria, although there had been no sickness on board; while that of Corfu twenty years later was supposed to be traceable to contagion remaining latent in a hat belonging to an officer who had died at Malta, the hat having been sent to his friends at Corfu. It was assumed that because a disease is at times transmissible from one individual to another, therefore the property of contagion is an absolute and essential attribute. It is well known that the activity of contagion varies greatly, as is well seen in epidemic seasons by contrasting the different degrees of activity during the various stages of its existence. Thus, during the height of an outbreak the activity of contagion is far greater than during its decline, a fact which harmonises with our present knowledge of the theory of infective disease. Perhaps one of the strongest proofs of the belief in the theory of contagion exists in the practice of quarantine officers who invariably put their questions when inspecting ships from a boat alongside and never go on board the vessels themselves until they have been admitted to pratique. As to the different amount of risk between going alongside and actually going on board the evidence of Dr. Dickson, the medical officer of Her Majesty's Customs, is of great interest: "As these officers spend their lives on board vessels from abroad, all of which are for a longer or shorter time under their surveillance, their sanitary condition may be considered a fair criterion of that in the port in connexion with its foreign trade. Their almost entire exemption from zymotic diseases not only in this but in preceding years is very remarkable. Even in the great cholera visitation of 1866, when they were of necessity often living on ships from infected countries, no instance of the malady occurred among them. Dr. Russell of Gravesend, who has been in immediate charge of a section of this force for nearly half a century, has hardly known an instance of a Custom-house officer being infected from contagion on vessels where they have been boarded, and from my knowledge of the numerous London division, whose daily business is on ships in dock discharging cargo, I can fully corroborate his statements."

But plague was held to be conveyed not only by the direct contact of individuals, but also by other persons who have been in contact with them and the various articles of merchandise carried as cargoes. Hence arose the distinction in all quarantine regulations between "susceptible" goods—i.e., those that were capable of carrying the poison—and "non-susceptible"—those incapable of so carrying it. It is somewhat difficult to understand how this arbitrary distinction arose. It is sufficient to quote one or two instances to show how fanciful and absurd the distinction was. Thus in 1840 in Italy bars of iron were passed through the fire in order to destroy infection. In 1846 tallow and wax were classed as "non-susceptible," while candles were placed on the "susceptible" list. Old copper and metal were "susceptible," while wood was "non-susceptible." The plague of London in 1665 was stated by Hodges to have been imported by means of bales of cotton. But careful investigation showed that the registers furnished evidence of death from this disease for some years previously to the general outbreak, while the disease had existed in Europe for centuries. When epidemic plague raged in Alexandria and all the servants and employés of the Egyptian Government were daily handling bales of cotton which were afterwards exported, although no precautionary measures were taken, there would seem to have been no infection carried by such goods. At the lazarets of Marseilles it is stated that not one of the porters discharging cargoes from suspected vessels has ever been attacked. Sir Wm. Pym, the Superintendent of Quarantine, says: "I could not ascertain that any one case of plague had been introduced in any of the lazarets I visited in consequence of the importation of merchandise"; and, again: "From what I have stated as to the non-appearance of plague in any one instance from the manipulation of merchandise in the lazarets the present practice of exposing goods to the atmosphere for a certain period appears to have been attended with success." Dr. Milroy, in commenting upon this, wisely remarks that probably it had never occurred to him that they need not have been contagious at all, and that the process of airing was possibly an unnecessary farce. Dr. Patrick Russell, in his treatise on the plague in 1791, says: "One custom of the merchants is on very hot days to take their walks in lines and in the shades made by packs of flax, that is an infamous plague keeper, and is brought from Cairo, famed for being the fountain and granary of plagues, where they were supposed to be bred and from thence propagated to all other countries. Nay, a head of flax is hung out of every pack for a sample of the whole, which those merchants make no doubt to examine every bargain they make. So little do they know of a plague of pestilence being conveyed by these goods that they handle and examine them rapidly, even flax of the growth of Grand Cairo."

In his communications as to the mode of diffusion of the plague in the epidemic of Hillah and Bagdad in 1876–1877 Cabiadis[6] gives as his conclusions that mere contact with an infected person is without danger if not unduly prolonged, and that persons living in the same house, however carefully they may isolate themselves, are usually attacked. Again, recently, during the outbreak of plague in Hong-Kong, it has been shown by Dr. Lowson that the disease is not contagious, nor is it conveyed by the breath of a sick person. He quotes as proof the fact that none of the party told off to visit or remove those affected with plague were attacked, although they spent four hours daily in the most infected houses in the city, while none of the attendants on the *Hygeia* hospital ship suffered from the disease, although the patients were not only overcrowded, but on account of the difficulty of obtaining washermen were allowed to remain in a filthy state

[4] Dr. Proust: Sur la Peste et les Quarantines, 1846.
[5] Sir Sherston Baker: Nautical Magazine, November, 1896.
[6] Brit. Med. Jour., 1879.

in their dirty clothes. At the Chinese hospital the state of things was even worse; but although the building was over full with dead and dying, the atmosphere being "indescribably bad," none of the attendants contracted the disease, though they often slept in the wards with their patients. Dr. Lowson concludes that the infection is conveyed much in the same way as phthisis is, by the sputum of the patient.[7] Staff Surgeon Wilm, R.N., invariably found the plague bacillus present in the fæces of the sufferers.

Yellow fever is no longer considered as a contagious disease, but it is undoubtedly transmissible by means of an infected ship. Professor Bailey of Louisville,[8] in 1879, speaks of the transmission of a section of the climate of a yellow-fever district, and states that the ships brought something from the climate and not from the sick. "For this something to be effective it was requisite that the locality into which it was imported should have for the time being a temperature equal to and approximate to that of a true yellow-fever district, and from this point of view a quarantine including persons was an elaborate folly." Yellow fever, perhaps, presents a stronger case against quarantine than any other disease. In addition to its uselessness, which will be dealt with later on, it is in this disease that the greatest danger arises from its exaction. The fact that the vessel itself is infected is an argument for treating her as rapidly as possible for the destruction of the infection, but certainly not for retaining healthy persons on board exposed to the danger, which is increased by the fact that, instead of being at sea and exposed to free air and ventilation, she is lying still in port or harbour. The longer such a vessel is detained in quarantine the greater the actual danger, assuming infection to exist. Dr. Vanderpoel[9] says: "The longer such a vessel is allowed to remain untouched—i. e., the longer a quarantine is enacted—the greater will be the virulence of the disease and the greater the danger of spreading the infection. The epidemic which appeared at Bay Ridge, Long Island, some years since was undoubtedly due to this cause; vessels were strung along the Long Island shore to ride out a specific detention until the whole fleet was thoroughly infected and the disease passed readily to the mainland. It is this practice of detention which in the past has contravened the interests of shipping and commercial men and has kept up a chronic warfare between merchants and quarantine." So far as the United Kingdom is concerned the uselessness of quarantine is obvious from the fact that yellow fever is purely a tropical disease and is found as a permanent disease—that is, lasting all the year through and becoming sometimes epidemic even during the cold season—only in those regions where the mean winter temperature amounts to at least from 68° to 72° F.[10] The fact, however, that a low temperature, while preventing the extension of the disease, does not destroy the germ, which may remain latent, developing again under suitable conditions, only emphasises the importance of dealing early with the seat of infection. Of this on board ship there exists many proofs. Yellow fever has practically always been carried by means of shipping, and this has been due to the actual infection of the vessel and not to the contagion from infected persons. As an instance of the slight amount of danger from the latter source Sir John Simon, in his eighth report to the Privy Council, mentions the fact that "during the epidemic at Lisbon in 1857 thousands of persons fled far and wide into surrounding districts; among those who thus fled numbers were already incubating the disease, and of course fell ill with it in their respective places of refuge more or less distant from Lisbon. In 182 cases of this description the Portuguese Government caused inquiry to be made whether persons about the sick fugitives had shown any signs of the infection, and the answers were that in no single case had this occurred."

With cholera, the only other disease against which quarantine is now directed, the case is quite as strong. It is quite unnecessary to adduce any proof of the non-contagious nature of the disease. In the fæces, and in the fæces alone, lies the infective germ, the comma vibrio, and this being capable of existing independently in water for a certain time is by means of this fluid conveyed freely wherever the sanitary conditions are such as to render possible the specific contamination of a supply common to a large number of persons. Wherever the water-supply is itself pure and protected from specific contamination an outbreak of cholera may be regarded with equanimity—it can be controlled and dealt with. The admission of cholera patients into general hospitals (while not advisable on account of the difficulty of dealing with the excreta) is a common practice, and there is no evidence of this having been productive of harm. There is, further, no authentic proof of the disease having been conveyed by merchandise or clothing, except where this has been actually soiled with the bowel discharges of infected persons. Dr. Alison mentions his experience as demonstrator of anatomy at Glasgow to prove that the disease cannot be communicated by means of the bodies of those who have died from the disease. He states that during the epidemic of cholera in 1848-49, when nearly all the subjects for dissection had died from cholera, not a single student suffered from the disease. In Paris during the outbreak of cholera in 1866 it was stated that not 1 of the 300 washerwomen employed by the Bureau de l'Assistance Publique was attacked, and that only 2 out of 911 men employed to conduct the funerals suffered.

Generally, then, of the three diseases—cholera, yellow fever, and plague—against which quarantine was directed not one can be considered as a contagious disease, although this was the main argument upon which the system was based. Much of the opposition to the abolition of quarantine has undoubtedly arisen from the fact that there was a strong interest for upholding the theory of contagion. The abolition of the system would have the immediate result of depriving a large number of persons of their means of obtaining a livelihood and of putting an end to the large revenue derived from fees and taxes. Hence, pressure was put upon quarantine medical officers to continue to advance views of pure contagion. M. Frank writes: "Let no one who declares the plague not to be contagious be allowed to exercise any public functions connected with this calamity; if there be such a functionary dismiss him."

2. That when carried out as strictly as possible quarantine had not had the effect of arresting the importation of disease.—The whole history of quarantine is a series of illustrations of its futility and proves it to be, as Sir John Simon so graphically described it, an elaborate system of leakiness. Theory must give way to practice, and the real test of quarantine as a system to be relied upon by the Government of a country for its protection must eventually be that of actual experience. As soon as investigation was made into the facts it was extraordinary how little evidence there was of the value of the system for the purpose which it was intended to serve. Dr. Colin[11] quotes the case of Civita Vecchia and says: "I could satisfy myself of the immunity of the port at a time when cholera prevailed at Leghorn, Naples, Ancona, and Sicily, everywhere imported by communication by sea; this immunity was entirely due to the rigorous and lengthy quarantine imposed upon all passengers from suspected vessels." Doubtless there was much force in this statement, inasmuch as the prospect of detention for a minimum of twenty-five days when a case of cholera had occurred on board had naturally the effect of putting a stop to all the Mediterranean trade. No one has ever attempted to prove that absolute cessation of intercourse with an infected place would not tend to arrest the disease. Putting all other considerations such as commerce and the interests of nations aside, it is obvious that total prohibition or an effective quarantine, though it might ruin a country, would doubtless prevent the importation of disease. "Compare with this the numerous visitations which Algeria has suffered (always imported from France) owing to the insufficient sanitary (quarantine) establishments along the coast. In marked contrast to the experience of this country was the immunity of the Balearic Isles in 1849, the immunity of Sicily in 1865-66 (until the arrival of the infected troops to put down the insurrection there), and the immunity at the same period of the islands of the Archipelago, and, lastly, the immunity in 1880 of the Turkish ports in the Black Sea in consequence of the quarantine restrictions against all arrivals from Russian ports."

But it must be borne in mind that the incidence of epidemic disease has always been most uncertain and in many cases inexplicable owing to the absence of exact information. In every epidemic it has been observed that certain localities and ports, though enjoying the freest communication with infected places, have remained exempt, so

[7] Dr. J. R. Lowson: THE LANCET, Feb. 13th, 1897.
[8] THE LANCET, vol. ii., 1879, p. 359.
[9] Quarantine Bucks, Hygiene, vol. ii.
[10] Hirsch, vol. i., p. 351.
[11] Quarantine, 1873.

that the mere fact of the escape of any one place in any given epidemic cannot be accepted as proof of the efficiency of quarantine. To explain the position of this country with reference to quarantine Dr. Colin says: "There are countries in which, notwithstanding their freedom of international intercourse, cholera seems to be with difficulty imported. Such is England, which seems to enjoy to a certain extent the privilege of continuing in epidemic seasons its commercial relations with impunity. There is nothing extraordinary in this, and it would be dangerous to infer from partial immunities the inutility of quarantine measures against cholera in all places. England knows pretty well that she owes her preservation to her geographical position." Unfortunately, however, from some points of view—though, perhaps, in the main fortunately—the immunity of England from the importation of cholera is by no means a fact, as her repeated outbreaks in 1848-49, 1853, and 1866 clearly show. Quarantine as practised in this country was found useless in the epidemic of 1831-1848, and was therefore abandoned. Spain and Italy have never succeeded in escaping any cholera epidemics, although it is in these countries that quarantine has been most rigorously carried out. During the Crimean War, as previously mentioned, quarantine was practically in abeyance; and in 1854, when cholera was raging in England, there was free intercourse between Gibraltar and Malta and also between those places and the Mediterranean, Black Sea, and Bosphorus. During the whole of the war, although vessels were landing sick at Gibraltar and Malta with no other precautions than their immediate isolation in hospital on shore, no spread occurred at either of those places. At the same time strict quarantine was kept up in other countries and failed to protect them. To give another instance, in 1855 a steamer arrived at Constantinople from Marseilles with a soldier suffering from diarrhœa, from which he eventually died and was buried at sea. On arrival at Syra, although there was no sickness on board of any kind, the vessel was declared to be infected and placed in quarantine, the passengers being landed for a period of ten days. Nevertheless, in spite of this rigorous quarantine, Spain and Portugal both suffered very severely; Lisbon especially was heavily visited with cholera in 1856 and by yellow fever in 1857 and 1858. Dr. Choppin, the President of the Board of Health of Louisiana, says: "We in Louisiana, acting under a quarantine law not absolute in its restrictions, after an earnest effort in executing it, conducted with all the honesty and energy at our command, assisted by incorruptible officials, have utterly failed in preventing the importation of the pestilence, which has thrown gloom and sorrow over the whole of the south-western valley."

THE CARDIFF INFIRMARY.—The annual general meeting of the Governors of the Cardiff Infirmary was held on Feb. 26th. The number of in-patients admitted during 1896 was 1570, as against 1408 in 1895. The average number of beds occupied was 117·77, against 107 35 in 1895. The average cost of each bed was £50 1s., the cost in 1895 being £54 8s. 11,908 out-patients had been attended, an increase of 285 over the previous year. The total receipts for the year had been £6596 and the expenditure £6843. The last year's deficit of £1200 had been reduced to £277.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—A reception was given by the President, Dr. Sims Woodhead, and the council on March 5th at the Temperance Hospital, Hampstead-road, N.W. There were exhibits of x rays, the phonograph, microscopes, &c., performances by the Enfield orchestral band, and part songs. Readings were given by Mr. Vezey Strong and Dr. Ridge. The President, in opening the proceedings, said that he felt how unworthily he should fill the place of the late Sir B. W. Richardson, under whose able leadership the association had attained such great success. Alcohol should only be given when nothing else would do as well and in the same way as any other drug. Experiments had lately been made in America which showed that animals to whom alcohol was given were more easily invaded by the organisms of pus and anthrax, and this agreed with the experience of cholera epidemics in which those who took much alcohol were more liable to be attacked and to succumb. A statement as to the continued progress of the association was made by the hon. secretary, and short addresses were given by Dr. Heywood Smith and Dr. Hingston Fox.

The Erasmus Wilson Lectures

ON

THE PATHOLOGY OF THE LYMPHADENOID STRUCTURES.[1]

Delivered at the Royal College of Surgeons of England on March 1st, 3rd, and 5th, 1897,

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SURGEON TO OUT-PATIENTS AND THROAT DEPARTMENT, WESTMINSTER HOSPITAL, AND LECTURER ON PHYSIOLOGY AT WESTMINSTER HOSPITAL MEDICAL SCHOOL.

LECTURE III.[2]

Delivered on March 5th.

ILLUSTRATIONS OF THE LOCAL COMMENCEMENT OF LYMPHADENOMA.

Conjunctiva.—Trachoma forms a common illustration of an infection producing lymphadenomatous nodules. Lymphadenoma may occur in the eyelids. A boy had growths of the orbit and of the parotid region with leucocythæmia (Fröhlich).[3]

Nose.—In the nose overgrowth of the mucous membrane covering the inferior turbinals is very common, the result of local irritation. Occasionally it forms the starting place of a lymphadenomatous growth—e.g., in a case described by Rosenberg,[4] which became generalised, and death occurred in two and a half years from the commencement.

Tonsil.—On account of local irritation this organ is constantly seen in a condition of overgrowth. It may assume a malignant form, projecting as a tumour, capable at first of being shelled out, or extension may take place to the deep glands of the neck[5] or by rapid infiltration into the surrounding tissues of the fauces and pharynx.[6] Lymphadenoma may start in the tonsil, and after involving the glands in the neck become generalised.[7]

Pharynx.—Adenoid vegetations, a local overgrowth, is the common result of irritation. Occasionally a case commencing in this way spreads so as to involve the pharynx and larynx, and then become generalised (Chiari).[8] General hypertrophy of the fauces and pharynx is not uncommon, consisting of a simple overgrowth; cases, however, like those of Störk[9] are of a more malignant type, rapidly infiltrating the whole wall, causing anæmia, hæmorrhages, &c.

Larynx.—Measles and other infectious diseases may leave behind a hypertrophic laryngitis due to overgrowth of lymphadenoid tissue. In a case described by Stieda[10] there was found post mortem a general swelling of the ventricular bands and epiglottis with lymphadenoid tissue, also a general enlargement of the lymphatic glands and follicles.

Stomach and intestine.—It is well known that certain infectious diseases markedly affect the lymphadenoid tissue of the alimentary canal, especially the solitary and agminated follicles such as typhoid fever, anthrax, and the enteritis of swine. Less well known are the inflammatory changes in the intestinal follicles and the mesenteric lymph glands in diphtheria. In children after death from typical laryngeal diphtheria requiring tracheotomy Colman[11] found marked hyperæmia and enlargement of all the solitary follicles and Peyer's patches and mesenteric glands, no diphtheritic

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[1] These lectures were illustrated by specimens from the Anatomical and Pathological Museums of the Royal College of Surgeons of England and of the Westminster Hospital.

[2] Lectures I. and II. appeared in THE LANCET of March 6th and 13th, 1897, respectively.

[3] Fröhlich: Wiener Medicinische Wochenshrift, 1893, Band xliii., S. 285.

[4] Rosenberg: Verhandlungen der Berliner Medicinischen Gesellschaft, 1895, Band xxv., pt. ii., S. 341.

[5] Barker: Transactions of the Pathological Society, 1886, vol. xxxvii., p. 218.

[6] West: Ibid., 1882, vol. xxxiii., p. 331.

[7] Nash: Brit. Med. Jour., vol. ii., 1892, p. 1054.

[8] Chiari: Internationales Centralblatt für Laryngologie, 1895, S. 381.

[9] Störk: Wiener Medicinische Wochenschrift, 1894, Band xliv., S. 1697 et seq.

[10] Stieda: Archiv für Laryngologie, 1896. Band iv., S. 46.

[11] Colman: Transactions of the Pathological Society, 1883, vol. xxxix., p. 132.

membrane or bacilli or ulcerations being present. The cases of lymphadenomatous disease of the stomach and intestine have been collected by Newton Pitt[12] as follows: (1) A local tumour; (2) congestion and ulceration from hæmorrhage with leucocythæmia; (3) a new growth arising in the mucous and sub-mucous tissue and projecting into the lumen, especially from the lymphadenoid follicles in the cæcum and appendix; and (4) a widespread overgrowth infiltrating the coats of the bowel and forming a kind of sheath, leading to constriction or paralytic dilatation. No doubt in a number of cases it is difficult to know when the disease commenced, and, on the other hand, owing to early obstruction or perforation or other complication, the disease may never have time to become widely generalised. (Moore,[13] Hadden).[14] Yet all kinds of extension to the glands spleen, &c., are met with. A frequent origin of the condition is the chronic intestinal catarrh of children, in which, however, tubercle and lymphadenoma are difficult to distinguish. In some cases there has been distinct evidences as to causation. In Taylor's[15] case lymphadenoma of the small intestine followed upon typhoid fever. Coupland's[16] case of malignant lymphadenoma of the stomach was preceded by dyspepsia and inflammation of the bowels. The disease extended to the retro-peritoneal glands, then to the kidneys, ovaries, thyroid, and intra-muscular tissue of the thigh.

Bronchial and posterior mediastinal glands.—In no place where it occurs is the local origin of lymphadenoma more clearly marked. The very fact that it is so frequently found along with some signs of tuberculosis in the lung shows that although not of tuberculous origin it is much of the same kind. Another sign of preliminary excitation is the black pigment contained in the growth. The over-growth not only includes the actual lymphatic glands, but also the lymphadenoid tissue around the bronchi. The growths may rapidly compress the air-tubes and prove fatal before such extension. Yet when it happens to compress the lungs rather than the bronchi much greater extension may occur. Thus in Chaplin's[17] case after influenza—and this has been a common cause—dyspnœa and anæmia followed, and there was found post mortem a mass of glands around the bronchi extending into and infiltrating the right lung, whilst in the left lung were some caseating tuberculous nodules. The cervical, axillary, inguinal, and lumbar glands were enlarged, but not caseating. The spleen was characteristically lymphadenomatous. If we take three of Turner and Sutton's cases[18] we have instances of different types, but all three affording indications as to their primary origin. In a boy aged ten years there were cheesy masses in the apices of the lungs, enlarged mediastinal axillary, submaxillary, and inguinal glands, some hard, others soft, and the kidneys were enlarged and infiltrated, but not the liver and spleen. The boy had suffered from purpuric eruption, ecchymosis, and anæmia, clear evidence that there had been also leucocythæmia. A man aged thirty-six years, who had suffered from syphilis and had been addicted to drink, had caseous and fibroid changes in the lungs, a mass of glands compressing the right bronchus. He had had leucocythæmia and showed thrombosis of the iliac veins, embolism of the middle cerebral artery, and the spleen was enlarged with firm masses in it. A woman aged twenty-four years commenced by suffering from pleurisy and pericarditis, which were followed by faintness after food, morning retching, stabbing pain in the chest, and dysentery. The pleura and pericardium were thickened and, together with the right lung, infiltrated by greyish nodules, the bronchial, cervical, and lumbar glands were enlarged and softened, and the spleen, liver, and kidneys infiltrated by semi-gelatinous nodules.

The thymus.—The thymus is also the subject of lymphadenomatous enlargement, and this is clearly distinguishable from the condition of cystic and hæmorrhagic enlargement at birth by the fact that other lymphadenoid tissues are involved. Thus in a woman aged twenty-nine years there was great enlargement of the thymus along with a similar condition of the supraclavicular and axillary lymphatic glands (Brigidi and Piccoli).[19] In a child, aged nine years, besides the thymus, which formed the greatest enlargement, there was also enlargement of the spleen and the intestinal follicles, together with nodules in the liver (Eberth).[20] In the case of a woman who died shortly after removal of a goitre the thymus was found enlarged as well as the tonsils, both palatal and lingual, and the intestinal follicles (Schnitzler).[21] Virchow[22] said that he had seen a number of cases occurring in young recruits which began in the thymus. Of course, it is possible for a malignant tumour to begin in the thymus and yet not be lymphadenoid in character, as in the case described by Rolleston of a hæmorrhagic adeno-chondro-sarcoma, the glandular portion having the appearance of being derived from mucous glands like the parotid; the tumour in this case clearly grew from remains of the primary thymus to which Hassall's corpuscles belong. The growths in the thymus and anterior mediastinum are usually fatal at an early period before much generalisation has occurred owing to tracheal and bronchial pressure.

The axilla.—Chronic enlargement of the lymph glands from irritation entering the lymphatics from the hand and also from the breast may be found tuberculous on exploration. In other cases it may be recognised as the starting-point of lymphadenoma. I have had two cases under my care lately in both of which the enlarged glands were certainly neither tuberculous nor malignant. They showed on section lymphadenoid fibrous tissue, and portions had so intimately ensheathed the bloodvessels as to be irremoveable.

Neck.—Lymphadenoma frequently commences in the neck. In some cases it is possible to assign a cause, such as a carious tooth, a purulent discharge from the ear, and repeated inflammations of the tonsils. It may start as an acute or sub-acute glandular inflammation, something like mumps,[23] which suggests a specific cause reaching the glands by the lymphatics. It is most difficult to distinguish from tubercle except by the tendency to caseation on the part of the latter. As I have before mentioned, this caseation is absent in the diffuse form. I have had lately a man under my care with enlargement of the glands on both sides of the neck of an indolent character. As arsenic was of no avail I removed some. There was no evidence of caseation, but from the microscopical structure the appearance was either that of diffuse tubercle or an endothelial new growth, but the latter was excluded by the time the disease had lasted. A case of lymphadenomatous glands in the neck which I have long had under view is interesting as standing intermediate between a local and generalised lymphadenoid. A middle-aged man was under my colleague Dr. de Havilland Hall with a lymphadenomatous mass in the neck. For some time arsenical treatment kept the growth in check. Later, enlargement continued in spite of the treatment, and I removed all that I could of the growth, leaving some masses about the large vessels in the root of the neck. After the operation he was again put on arsenic, and although the lymphadenoma has never quite gone it has for some years not advanced. Unfortunately, the man cannot continue a course of arsenic very long without sickening of the drug and then he has to rest awhile. The most malignant form of lymphadenoma may commence in the neck. A girl (under Durham[24]) first felt the neck stiff and tender after sleeping in a damp bed. The enlargement commenced below the jaw, soon ulcerated, and then formed a large oval ulcer, infiltrating the muscles of the neck. After death an enlarged mass was found surrounding the upper part of the abdominal aorta behind the stomach and pancreas, involving the mesenteric and lumbar glands.

The groin.—The groin is not uncommonly the starting place of lymphadenoma of various forms. Sometimes evidence of previous source of irritation is found, such as venereal disease, strain, or septic absorption from the leg. A chronic indolent enlargement is seen in hot climates, of obscure origin, sometimes called malarial. As compared with the gland in the neck the rarity of tubercle is remarkable, and on this account the diagnosis of lymphadenoma is made easier. I saw, however, not long ago a young man who had been put under an anæsthetic in order to remove a mass of glands supposed to be tuberculous. The operation was not begun owing to enlargement of iliac and lumbar glands being discovered. I suggested the administration of

[12] Newton Pitt: Ibid., 1889, vol. xl., p. 80.
[13] Norman Moore: Ibid., 1883, vol. xxxiv., p. 99.
[14] Hadden: Ibid., 1886, vol. xxxvii., p. 234.
[15] Taylor: Ibid., 1877, vol. xxviii., p. 135.
[16] Coupland: Ibid., 1877, vol. xxviii., p. 126.
[17] Chaplin: Ibid., 1893, vol. xliv., p. 13.
[18] Turner and Sutton: Ibid., 1878, vol. xxix., p. 343.
[19] Brigidi and Piccoli: Beiträge zur Pathologischen Anatomie und zur Allgemeinen Pathologie, 1894, Band xvi., S. 388.
[20] Eberth: Virchow's Archiv, 1870, Band xlix., S. 63.
[21] Schnitzler: Status Thymicus, Wiener Klinische Wochenschrift, 1894, No. 20.
[22] Virchow: Berliner Klinische Wochenschrift, 1891, S. 1185.
[23] Dawson Williams: THE LANCET, Jan. 16th, 1897, p. 160, and others in following numbers on A Glandular Fever of Childhood.
[24] Durham: Transactions of the Pathological Society, 1883, vol. xxxiv., p. 245.

large doses of arsenic, and the glands both in the groin and in the lumbar region quickly subsided. Unfortunately, however, lymphadenoma of the groin has a very great tendency to become generalised and to show malignant characters. In Taylor's[25] case the lymphadenoma commenced as a lump in the groin, and this was followed by swelling of the leg, general enlargement of the lymphatic glands, especially those of the parotid and sub-maxillary regions, and was attended by fever but not by leucocythæmia. The liver was found at the post-mortem examination to be enlarged, but not the spleen. On the other hand, in Greenfield's[26] case, the spleen, lungs, and skin were affected from a growth in the groin, but not the other lymphatic glands. The lymphadenoma may remain local, but infiltrate most widely around after a malignant fashion. In Lediard's[27] case there had been a lump in the groin for three years, then it ulcerated and formed a bleeding mass, which caused extreme anæmia accompanied by fever and vomiting. No other growths were discovered post mortem. In Morton's[28] case the enlargement began symmetrically and simulated at first chronic recurrent inflammation. Later, the growth extended and infiltrated the muscles of the abdominal wall and surrounded the large vessels. The lungs were found studded with secondary growths. There are, however, many cases of lymphadenoma in the groin which are not malignant in the earlier stages, and which either yield to drugs or admit of removal. Even when the lumbar glands have been enlarged behind the peritoneum they have been successfully shelled out (Marconi).[29]

The spleen and bone marrow, especially the former, are involved when lymph-adenoma becomes generalised, and hence there are endless varieties of combinations with enlarged lymph glands and with leucocythæmia.

Spleen.—The commencement of lymphadenoma in the spleen is very questionable. The cases in which the spleen is the chief organ involved are mostly diseases which have in all probability entered through the alimentary canal, or are due to some other general infection through the circulation. Enlargement of the spleen is common in young children and sometimes seems due to nothing more than bad feeding. Upon suitable nourishment and arrest of intestinal catarrh the spleen subsides. However, if the case is not taken early generalised lymphadenoma soon sets in with anæmia, leucocythæmia, and enlargement of lymphatic glands and follicles. Malaria and malarial affections are another common source of lymphadenoma; the spleen remains enlarged after the malaria has subsided. Wilson[30] has recorded cases occurring in three generations of the same family in which there were enlargement of the spleen and anæmia, but without leucocytosis or enlarged lymph glands. There is considerable practical importance in the distinction because a spleen enlarged simply as the result of malaria has been frequently removed with success. On the other hand, all cases of splenectomy in generalised lymphadenoma with leucocythæmia have failed. The changes produced in lymphadenoma in the spleen are of two kinds. In one form the Malpighian bodies stand prominently out as white or yellowish masses, which are hard to distinguish from tubercle. In other cases the enlargement is of the diffused variety, soft when the overgrowth is mainly of lymphadenoid tissue, hard when mainly of connective tissue from the capsule and septa. This latter form also contains much pigment and is difficult to distinguish from a spleen the result of malaria. In cases of lymphadenoma accompanied by leucocythæmia the spleen, besides being much enlarged, is liable to wedge-shaped infarcts. The local enlargement of the spleen occurring by itself, having no obvious connexion with any affection of the other lymphadenoid tissue or with the blood, has been called primary splenomegaly. The growth is slow, and cases have been submitted to splenectomy successfully. It is not very clear, but apparently it is the cells of the splenic pulp which multiply and compose them. The interest lies, then, in the slow and local growth of the primary tumours. In this respect it may be compared to some of the tumours of bone.[31] The carcinomas and sarcomas of the spleen are secondary growths.

Bone marrow.—It is in generalised lymphadenoma that the bones are affected, but there is this marked distinction, that beyond the change to lymphoid marrow the bones show only tenderness, temporary swelling of the soft parts, and pain. There is no enlargement like the spleen. In such cases the spleen is always enlarged, very often all lymphadenoid structures, and there is leucocythæmia. I doubt very much the existence of the so-called "pure myelogenic leucocythæmia." Returning now to the new formations allied to lymphadenoma. A simple circumscribed tumour may commence and grow slowly, without at first causing any marked enlargement of the bone, but rather replacing the bone framework and the marrow cavity by a very delicate, moss-like bone. Owing to the absence of a distinct enlargement notice may first be drawn to the growth by the occurrence of a spontaneous fracture owing to the replacement of the bone by the tumour. In structure the growth consists of small, round cells with a variable amount of newly formed connective tissue into which hæmorrhages may occur. In other cases the tumours are multiple in one or many of the bones of the skeleton, appearing as discrete tumours through which the knife easily cuts, or undergoing secondary changes resulting in hæmorrhages or cyst formation, or pathological fractures (Herrick and Hektoen,[32] Kahler[33]). Generalisation takes place in some cases very early and in others only late. These generalised forms connected especially with bone marrow assume three types—one approaching cancerous osteomalacia, one approaching osteitis deformans, and one in which leucocythæmia is the prominent feature. But in all there is some enlargement of lymphadenoid tissue in the lymphatic glands, spleen, &c. Nothnagel's case[34] was of an osteomalacic type. Pain began in the sternum and was attended by wasting, sweating, and irregular fever. The pain spread to the bones of the trunk and extremities, besides which there was anæmia, swelling of the spleen, and enlargement of the lymphatic glands, but there was no leucocythæmia. The bones especially affected were the scapula, clavicle, ribs, vertebræ, sternum, pelvis, and the metatarsal and metacarpal bones. On post-mortem examination the fatty marrow was found to have been replaced by greyish-white material interspersed with long septa. The tissue consisted of small round cells and contained blood pigment. On maceration the bones appeared of a spongy material like moss which had filled the marrow cavity. Moore, Hammer, and Goodhart's cases are closely related or show intermediary stages with osteitis deformans. In Moore's[35] case the skull was infiltrated by small round cells and the cervical lymph glands were enlarged. In Hammer's[36] case the skull and vertebræ were much thickened and the spleen and lymphatic glands were enlarged. Goodhart[37] described a typical case of osteitis deformans with nodules of lymphadenoid material in the spleen, liver, pleura, and in the mediastinal and abdominal glands. Leucocythæmia was a prominent symptom in the following cases. A woman suffered from symptoms of anæmia, erythema nodosum, and rapid cachexia. At first she had amenorrhœa and then profuse uterine hæmorrhages. There was great tenderness of the sternum, the ribs were slightly tender, and the red corpuscles were to the white as 5 to 1. At the post-mortem examination there were many small hæmorrhages, but no enlarged lymphatic glands. The spleen weighed 10 oz. The skull cap was very heavy and dense and the cavity of the femur was full of red lymphoid marrow (Beatty).[38] Grawitz[39] described a similar case which he called malignant osteomyelitis attended by marked anæmia and metastasis. In Zahn's[40] case there were lymphatic tumours with softening of the bones, curvature

[25] Taylor: Clinical Journal, 1896, vol. viii., p. 33.
[26] Greenfield: Transactions of the Pathological Society, 1876, vol. xxvii., p. 275.
[27] Lediard: Ibid., 1886, vol. xxxvii., p. 472.
[28] Morton: Ibid., 1895, vol. xlvi., p. 162.
[29] Marconi: Successful Removal of a Lympho-sarcoma with Resection of 3 c.m. of the Inferior Vena Cava, Centralblatt für Chirurgie, 1894, p. 334.
[30] Wilson: Transactions of the Clinical Society, 1893, p. 163.
[31] See many of the cases of successful splenectomy—e.g., Knowsley Thornton: Multilocular Cystic Tumours of the Spleen, Transactions of the Pathological Society, 1884, vol. xxxv., p. 385; Bruhl: De la Splénomégalie primitive, Archives Générales de Médecine, 1891, tome 167, p. 673, and tome 168, p. 160; Picou et Ramond: Splénomégalie primitive, Archives de Médecine Expérimentale et d'Anatomie Pathologique, 1896, tome 8, p. 168. The enlarged spleen removed successfully by Mariott (Museum of the Royal College of Surgeons of England, No. 2666 A) was found to be tubercular in structure.
[32] Herrick and Hektoen: Medical News, Philadelphia, 1894, vol. ii., p. 239.
[33] Kahler: Prager Medicinische Wochenschrift, 1889, Nos. 4 and 5; also Centralblatt für Chirurgie, 1889, p. 451.
[34] Nothnagel: Lymphadenia Ossium, Virchow's Festschrift, 1891, Band ii., S. 155.
[35] Norman Moore: Transactions of the Pathological Society, vol. xxxvi., 1885, p. 393.
[36] Hammer: Primäre Sarcomatose Osteitis mit Chronischen Rückfallsfieber, Virchow's Archiv, 1894, Band cxxxvii., S. 280.
[37] Goodhart: Transactions of the Pathological Society, vol. xxxix., 1888, p. 262.
[38] Beatty: Academy of Medicine of Ireland, March 6th, 1891.
[39] Grawitz und Zahn: vide Markwald, Virchow's Archiv, 1895, Band cxli., S. 128.
[40] Ibid.

of the vertebræ, and spontaneous fractures of the ribs. In Weber's[41] case, a man aged forty years, who had had syphilis, died exhausted after one and a half years' illness. The sternum was enlarged and bent with the ribs so as to compress the aorta, and these bones with the vertebræ contained reddish tissue. The cranium had many rounded spots the size of a threepenny-piece. There was amyloid degeneration in the kidneys and spleen. The new tissue consisted of small round cells. Comparable to the primary tumours of the spleen called splenomegaly, are the well known giant-celled myelomas or myeloid sarcomata, which grow from the marrow at the ends of the long bones and in the short and flat bones. But as distinguished from the small celled myelomas or lymphadenomas of the bone-marrow above noted they show no tendency to involve the other lymphadenoid tissues. A further resemblance between the spleen and marrow is to be found in the fact that carcinomas and sarcomas of the bone-marrow are likewise secondary growths.

THE COMPLICATIONS WHICH ATTEND LYMPHADENOMA.

Fever.—Any form of lymphadenoid enlargement may be attended by fever the result of cell destruction and of the absorption of the products. The characteristic fever of tonsillitis and other glandular affections, of typhoid fever, malaria, and relapsing fever are well known. In cases of generalised lymphadenoma a fever of the continuous or intermittent type, but generally irregular, occurs, and is accompanied by profuse sweating and general exhaustion.

Leucocythæmia and anæmia.—I have already referred to the fact that an excessive production of white cells provokes destruction of red cells and also intravascular coagulation. Infarcts occur especially in the spleen, the capillaries of mucous membranes and of the cerebral arteries, &c., become choked with white corpuscles, and ulceration and hæmorrhages ensue. The patient may die from recurrent epistaxis, cerebral hæmorrhage, perforation, &c. Fatal cerebral hæmorrhage may thus occur in young patients.

Fatal results of the pressure of lymphadenomatous masses.—Growths in the mediastinum press on the trachea and bronchi. The stomach or intestines may be compressed, intestinal obstruction ensue, or absorption by the lacteals be prevented. The heart and large bloodvessels may become surrounded by a solid mass which impedes the circulation. Compression upon the arteries, veins, and lymphatics affects important organs such as the liver and kidneys. Moreover, these organs may be infiltrated diffusely with small round cells which compress the actual gland cells and cause them to degenerate, so that the function of the gland may easily be much more impaired than the external appearance of the organ might lead one to suppose.

Lymphadenoma in animals.—The various forms of lymphadenoma are met with also in animals. I had a cat which suffered from marked anæmia and leucocythæmia; its spleen weighed one-tenth of the whole animal, whereas the spleen of a normal cat weighed on the same day was only $\frac{1}{179}$ part. A dog I examined had a lymphadenomatous mass which began in the posterior mediastinal glands and compressed the trachea and bronchi. A similar mass in another dog arose from the præ-vertebral abdominal glands and surrounded the lower end of the aorta and the iliacs. Reinländer[42] has noted lymphadenoma with leucocythæmia in the horse.

Lymphadenoma in relation to tubercle.—There must be some close connexion between lymphadenoma and tubercle, for in the majority of post-mortem examinations some distinct tuberculous lesion has been found and in many it has been impossible with the naked eye to distinguish what is lymphadenomatous from the tubercle. The absence of caseation is no disproof of tubercle, nor does the absence of giant cells on microscopical examination exclude the diffuse form of tubercle. The inoculation test is also liable to several fallacies—e.g., if both tubercle and lymphadenoma be present the tubercle bacilli may easily get into the blood or lymph passing through a lymphadenomatous mass. There appears also another similarity in these mixed cases of lymphadenoma and tubercle; both affections appear to start from the same place, whether this be through the throat, neck, lungs, or intestines. One of the first cases of lymphadenoma of which I have notes was that of a young man who came to St. Bartholomew's Hospital under Mr. Willett. I incised some tuberculous glands in the neck. He soon died with pulmonary œdema and bilateral hydrothorax. The heart and large vessels were enclosed in one mass of lymphadenoma and there were also masses in the abdomen. Besides the difficulty as to glands, it is easy to confuse lymphadenomatous masses in the lung with tubercle surrounded by hepatisation. The masses in the spleen, sometimes compared to suet in a pudding or to the almonds in toffee ("hardbake"), are due sometimes to lymphadenoma, sometimes to tubercle. Cases by Dietrich,[43] Fischer,[44] Cordua,[45] Ricker,[46] Brentano and Tangle,[47] Tooth,[48] Macnamara,[49] and Dickinson,[50] in addition to many writers already named, afford abundant evidence of the frequency with which these two effects occur together and of the difficulty in distinguishing them. The recent epidemics of influenza, besides causing tuberculosis, have in a number of cases started generalised lymphadenoma.

Lymphadenoma and syphilis.—The connexion is at any rate only an indirect one. Lymphadenoma has frequently started from a chronic, indolent, enlarged gland in the groin which may have been due to previous venereal infection. Again, where generalised lymphadenoma appears in a patient who has suffered from syphilis it may be thought that the latter has predisposed to the former (Guttman).[51] The success of the local application or internal administration of iodine or iodide of potassium cannot be held to indicate the syphilitic origin of the enlarged glands. Wunderlich saw masses of enlarged glands which he regarded as lymphadenoma disappear under iodide treatment in cases in which, he said, syphilis could be excluded. Hutchinson,[52] after describing the disappearance of large masses of glands, did not attribute the good effect of the iodide to the fact that syphilis was the cause of the enlargement, but says that it is interesting that any form of lymphadenoma should yield so readily to the iodide treatment. A woman still under my care had a characteristic mass of lymphadenoma on both sides of the neck which was extremely hard. The disease did not improve under arsenic alone; I then administered iodide internally and applied an iodide ointment externally, and this has been followed by a gradual disappearance of the glands. Before doing so I made an exploratory incision at one place which was exceedingly hard and painful; and in order to exclude tubercle I cut out a piece of tissue, which under the microscope was found to consist of sclerosed gland tissue with thick-walled vessels.

Lymphadenoma and its treatment by arsenic.—It is well known that arsenic is a most valuable drug in the treatment of lymphadenoid diseases, so that the benign and the malignant forms are often distinguished by the success or failure of the arsenical treatment. But the success or failure of the drug depends upon circumstances. The treatment must begin before complications have arisen; large doses are generally required. One preparation of arsenic will act better on, and be better borne by, one patient than another. Katzenstein[53] has described his success in "leukæmia lymphatica et splenica," accompanied by anæmia and cachexia, to the subcutaneous administration of arsenic. Liquor arsenicalis may be injected into the back or directly into the tumour. Touton[54] has described a case of general "sarcoma of the skin of leukæmic or pseudo-lukæmic origin" which was cured by arsenic. In Butlin's[55] case there was a bilateral affection of the testicle with nodules in the skin. The growths subsided under arsenical treatment. I saw a woman in St. Bartholomew's Hospital under Mr. Willett who had had both breasts removed in the country for malignant disease. The axillæ and infra-clavicular fossæ were one mass of enlarged glands. The whole subsided under arsenic, and presumably, therefore, the tumours of the breast would have done the same. I have already

[41] Parkes Weber: Transactions of the Pathological Society, 1896.
[42] Reinländer: Veterinary Journal, 1892, vol. xxxiv., p. 279.
[43] Dietrich: Beiträge zur Chirurgie von Bruns, 1896, Band xvi., 377.
[44] Fischer: Deutsche Zeitschrift für Chirurgie, 1893, Band xxxvi., 283.
[45] Cordua: Arbeiten an dem Pathologischen Institut zu Göttingen, 1893, S. 159.
[46] Ricker: Archiv für Klinische Chirurgie, 1895, Band l., 573.
[47] Brentano und Tangle: Deutsche Medicinische Wochenschrift, 1891, S. 538.
[48] Tooth: Transactions of the Pathological Society, 1885, vol. xxxvi., p. 236.
[49] Macnamara: Ibid., 1878, vol. xxix., p. 360.
[50] Dickinson: Ibid., 1878, vol. xxix., p. 373.
[51] Guttman: Centralblatt für die Medicinische Wissenschaften, 1895, S. 336.
[52] Hutchinson: Archives I., 72; II., 204.
[53] Katzenstein: Deutsches Archiv für Klinische Medicin, 1895, Band lvi., S. 121.
[54] Touton: Sitzungsberichte der Gesellschaft für Morphologie und Physiologie, München, 1893, Band viii., S. 88.
[55] Quoted by Shattock: Brit. Med. Jour., vol. i. 1896, p. 36.

referred to a case in which arsenic was successfully administered after the growth had been partly removed. One should not adhere to the surgical rule which obtains in carcinoma and sarcoma, that removal is only permissible when all the disease can be taken away. Partial removal followed by drug treatment is attended by success and prevents the disease from becoming generalised.

CONCLUSION.

I have noted in the course of these lectures some of the chief features exhibited by diseases of lymphadenoid structures; we may with confidence look forward to an increase before long of our knowledge, especially in two directions. Besides the organisms to which I have already referred to as known causes of lymphadenoid disease many observers have found organisms in lymphadenomatous growths. The results are not yet sufficiently in agreement for any opinion to be formed at present; the organism most frequently seen has been the staphylococcus aureus. There are a number of clinical observations on the effect of administering materials obtained from the thymus, spleen, and bone marrow, and some have been successful. With a greater knowledge of the infection we shall be better able to estimate individual differences in resistance and so obtain more light on the varieties of generalised lymphadenoma. Meanwhile we must base our treatment on the closely allied conditions produced by tubercle and syphilis. Excision of the disease where the conditions are favourable, and the administration both locally and internally of arsenic and iodide in full doses, will be attended by success when undertaken at an early stage, except against the most malignant cases. The treatment of the anæmia is the other important point, and is worthy of more relative attention than the leucocythæmia. Thus an improvement has followed upon the administration of oxygen [16] in cases of lymphadenoma, the diminished number of red cells being assisted in exchanging carbonic acid for oxygen by the large supply of the latter.

ILLUSTRATIVE CASES OF APHASIA.

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CASE 1. *Clinical remarks on a case of complete agraphia and almost complete word-blindness, with right-sided bilateral temporal hemianopsia, due to a lesion (gumma) in the region of the left angular gyrus, in which rapid and complete disappearance of all the symptoms took place under the administration of large doses of iodide of potassium.*—The case to which I wish to direct attention is one of very great interest. When first seen the patient was suffering from complete agraphia and word-blindness, with right-sided homonymous hemianopsia and slight optic neuritis. The word-blindness, hemianopsia, and optic neuritis have now entirely passed away and she is able to write as well as she has ever been able to do. In short, under the administration of large doses of iodide of potassium an extraordinarily rapid and complete cure has taken place. I will in the first place give the full clinical history, and then discuss some of the more important points.

Clinical History.[1] — A. B., a widow, aged thirty-four years, was admitted to Ward 5A of the Edinburgh Royal Infirmary under my care on Nov. 14th, complaining of severe pain in the head, dimness of vision, and general stupidity. The patient stated that she had suffered from her head since the harvest time. The headache came on suddenly about the middle of September. She attributed it to stooping in the hot sun while working in the fields. The pain was not continuous; ever since its commencement it had been worse at night. Three weeks before admission her eyesight became affected; the dimness of vision was rapidly developed. The patient stated that since her illness commenced she had felt "stupefied"; she felt as if she "were in a mist," not knowing exactly where she was or what she was doing. She definitely stated that from the commencement of the attack she had no difficulty in understanding what was said to her, but that she had some difficulty (hesitation and slowness) in answering questions put to her by her friends. She further stated that since her illness came on she had lost the ability to read and write. Before the attack she was a good reader, but her writing was never good, for she had never been to school. Her memory was, she said, very defective; she expressed it as "almost gone." She stated that with the exception of exposure to the sun she knew of no cause for her illness; she had never received any head injury. The patient stated that she had always been a strong, healthy woman and that she had never had any serious illness until the present trouble commenced. Her husband died abroad about five years previously. She had had two children and two miscarriages. The first, a girl, born at the full time, was stillborn. The second, a girl, born at the seventh month, lived for about two hours after its birth. The third and fourth pregnancies ended in abortions. This history was, it will be observed, highly suggestive of syphilis. She had no living relatives. She did not know the cause of the death of her parents—in short, she could give no information regarding the family history.

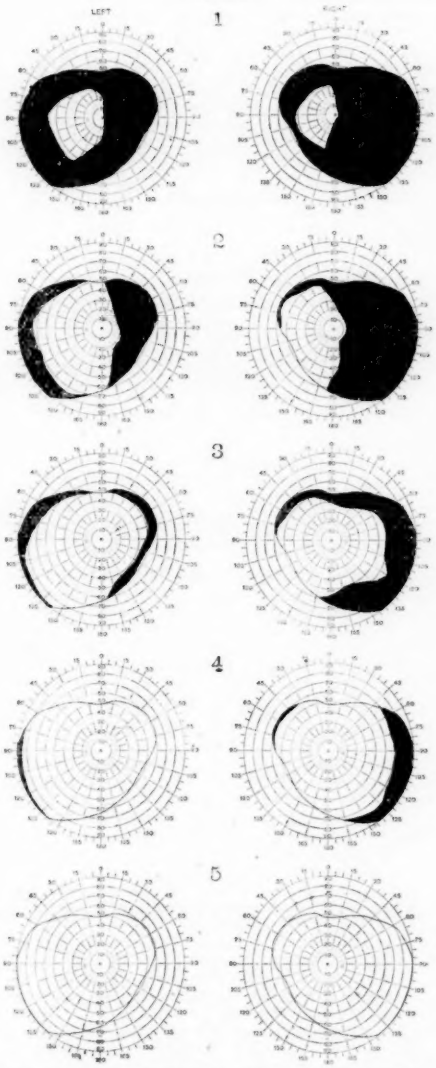
She was a fairly well-nourished, dark-complexioned woman, with a dreamy look. *Nervous system.*—She was unable to give ready answers to many questions which she should have easily answered straight off. For example, in answer to the question "Where do you live?" she at first made no answer, but some minutes afterwards suddenly gave the address. The difficulty in answering questions was, she said, not due to any defect in speaking or to any defect in understanding what was said to her, but to want of memory. The headache, which was her chief complaint, was very severe, but not constant; it was, she said, of a boring and squeezing character and was most marked over the vertex and frontal bone. It was much more severe at night than during the day and was sometimes aggravated, she said, during the day "by straining efforts to see with the right eye." She frequently clasped her head with her hands as if in pain, and when lying in bed burrowed her head in the pillows. There was no pain or tenderness on percussion over any part of the skull. There had been no vomiting, but the patient complained of giddiness. The pupils were equal in size, regular in shape and widely dilated; their reaction both to light and accommodation was distinctly sluggish. On ophthalmoscopic examination the edges of both discs were seen to be ill-defined and slightly swollen. These appearances were more marked in the left than in the right eye. There was, in short, a slight degree of optic neuritis. Perimeter measurements showed right-sided homonymous hemianopsia, with considerable constriction of the peripheral portions of the left side of the field in both eyes. (See Perimeter Chart 1, Fig. 1.) Central vision was unaffected and the patient could distinguish colours correctly. As regarded auditory speech, the patient could understand what was said to her perfectly well when she was first spoken to, but after a short time she became confused and stupid and her answers became hesitating or she failed to answer the questions which were put to her. The auditory-speech centre appeared, therefore, to be intact, but more easily exhausted than in health. Motor speech was normal, or practically so. At times she said she could not find the words she wished to use, but she never used wrong words except in naming objects. As regarded visual speech, she was quite unable to read anything except some individual letters and she was only able to recognise a few of these. After puzzling over single letters for a short time and naming some of them correctly she was unable to name any more. She had also difficulty in reading numbers. In short, there was a condition of almost complete word-blindness. She was unable to name many of the objects which were shown to her; she appeared to appreciate the fact that she was unable to name them and that she named them wrongly. (A more detailed report on this point will be given below.) There was complete agraphia. She could not write her own name; she could not write down any single letter; and she could not write to dictation any letter or word. With her right hand she could not copy letters or words; she made a very imperfect attempt to do so with the left hand. In short, the paths

[16] Taylor: Transactions of the Clinical Society, 1895, vol. xxviii., p. 47.

[1] The detailed clinical history recorded in the text was elicited as the result of repeated short examinations. When the patient was first admitted to the hospital her brain power was so easily exhausted that it was only possible to elicit the facts gradually—a few at each examination.

from the visual-word centre to the writing centre seemed to be completely blocked. The path from the higher visual centres to the auditory-speech centre seemed also to be in some degree interrupted, because of her inability to name many of the objects which she certainly saw and (?) apparently recognised. I will explain my reasons for this

FIG. 1.



Series of Perimeter Charts in the case of complete agraphia and almost complete word-blindness, with right-sided bilateral temporal hemianopsia, described in the text. (The black area represents the blind parts of the fields.)
Chart 1 represents the fields of vision on Nov. 17th.
,, 2 represents the fields of vision on Nov. 24th.
,, 3 represents the fields of vision on Dec. 1st.
,, 4 represents the fields of vision on Dec. 8th.
,, 5 represents the fields of vision on Dec. 15th.

localisation later. I should here note that the patient was naturally right-handed. There was very decided difficulty in making movements with the right hand when the eyes were closed. For example, when told to touch the tip of the nose with the right fore-finger she more than once merely waved the hand in the air and never once succeeded in touching the tip of her nose without hesitation. She could, however, perform this movement, the eyes being closed, with the left hand. There was no paralysis of the right hand. The squeezing power, as tested by the dynamometer, was quite as good in the right as in the left hand. She was unable to appreciate slight differences in weights placed in the two hands. Unless the difference was very considerable, she always said that the weight which was placed in the left hand was the heavier. When there was a marked difference between the weights she recognised it correctly. Tactile sensibility was unimpaired. The patient complained of giddiness and walked in a hesitating, shaky manner, apparently the result of giddiness and defective vision. The motor and sensory functions were, except for the defects described above, quite normal. *Alimentary system.*—The tongue was pale, flabby, white, and moist. The bowels were constipated. *Circulatory system.*—The first sound of the heart was very faint and weak, but there was no valvular disease. *Urinary system.*—The urine was pale amber-coloured and acid; its specific gravity was 1018, and it contained no abnormal constituents.

Treatment and its results.—On Nov. 14th (the date of her admission) ten grains of antipyrin were given when the headache was severe, together with a laxative each night. On the 15th, 16th, and 17th the patient's condition was unchanged. On the 18th the antipyrin was found to merely relieve the headache for the time, but produced no real benefit. She woke the previous night at twelve o'clock complaining of severe headache. During the greater part of the night she was tossing about in bed, holding her head with her hands, burying it in the pillows, and complaining of headache. Twenty grains of iodide of potassium three times daily were substituted for the antipyrin. The speech functions were carefully tested on this date with the following result. The patient understood everything that was said to her and answered questions with more facility (less hesitation) than she did on her admission. There seemed to be no defect either in the auditory-speech centre or in the motor-speech centre, but there was a decided want of sharpness and briskness in answering questions, apparently the result of the general mental dulness and slowness of cerebration which were present. There were marked word-blindness and complete agraphia. She was unable to name many of the objects which were shown to her. For example, when shown a knife she named it correctly; a pencil she termed a knife and fork; a bunch of keys she called knives; and a

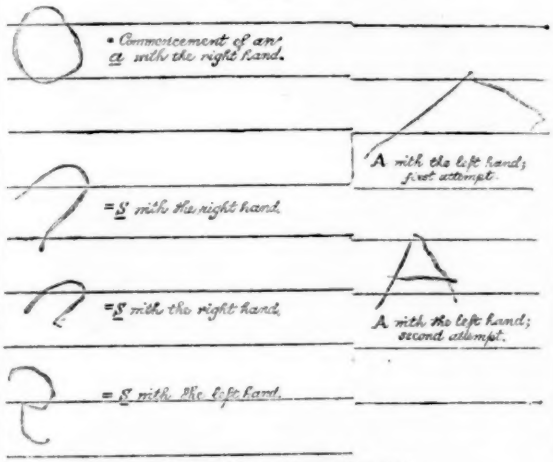
FIG. 2.

Facsimile of letters and words which the patient was unable to read on Nov. 18th.

tape measure she could not name. She recognised and was able to name a pencil after it had been named to her, but almost immediately afterwards was unable to name it. She instantly recognised and correctly named a penny, a halfpenny, a sixpence, a shilling, and half-sovereign. (The lightning-like rapidity with which she named pieces of money, when contrasted with her slowness in naming almost every other object which was shown to her, was very remarkable.) She was unable to name a door key; she said, "Oh! I ken what it is, if I could only keep it in

mind." She called a book a knife, and a bottle of medicine a knife. She could not read (name) any of the following letters and figures: "a, o, b, h, e, 5, and 3"; and could not read any of the following words: "dog," "cat," "God," and "hat." (See Fig. 2.) She was unable to write any letter or word to dictation or to copy any of the letters or words which were used as test objects. On the 19th, when asked her name, she stated it correctly, but she could not write it. She was able to spell the word "dog," but could not write it. She correctly named (read) the letter "o," but could not write it; she could not write the letter "a." On this day she correctly read (named) the letters "b, a, h, o, s, and q"; but could not read the following words: "dog," "hat," "Edinburgh," and "Florence." When asked to read the word "dog" she said, "It has just went out of my head; I have forgot it, I think." On the 20th the patient named a pencil, bottle, book, watch, keys, knife, and wax vesta correctly. She said the letter "t" was "h." She named the letter "o" correctly, but could not copy it. When told to write the letter "o" she said, "Oh! I cannot mind." She put the pencil frequently up to her lips, moistened it, and then, after placing it on the paper, made an attempt to write, but could not write a single letter or word. When asked what the number 10 was she said it was "to"; when told it was a number she said, "Then if numbers it is one and nothing; that would be two." She said "r" was "q" and named the letters "m" and "s" and the numbers "20" and "17" correctly. She said "132" was "13," and "246" was "400," but read the word "cat" and her own Christian name, but not her surname, correctly. The patient slept well at night, and on the 21st she said "a" was "f" and "o" was "f"; named "f" and "m" correctly; said "i" was "o" and "s" was "t" or "i"; named a pencil correctly; said a knife was a pencil or a shooting-knife; and said a button-hook was a pencil. When asked if it was a button-hook, she immediately said, "Yes—a button-hook." She was unable to name a tuning-fork. When asked to name a bunch of keys she said, "I don't mind the name," and then said watch-key. She was unable to tell the time. When asked to write her name she spelt it correctly, but could not write it. She named the letter "a" correctly, but could not write it. Asked to copy the letter "a" with the right hand she could not do so. When a pencil was placed in her right hand and she was told to write one of her own names she made spaces on the paper corresponding to the letters, but was unable to write any single letter. She was able to trace the letter "o" correctly with her left hand; wrote the letter "A" with her left hand imperfectly, making a triangle, and after having written it said she thought it looked like "X"; succeeded in making an "A" with the left hand on a second attempt; and made an imperfect attempt to form the letters "B" and "S" with her left hand. When asked to make an "s" with the right hand she could not do so, and said she felt as if her "hand were going from her." She made an "o" with her right hand, but could not make "a" or "b" with her right hand. On being shown pictures she recognised and named correctly the following: pigs, sheep, cows, dog, child, pigeon, monkey, and kitten. She said a picture of hay and horses was a farmyard; geese were ducks; and a horse was a farmyard. She could not name a cart or trees. When shown the picture of a donkey she said it was an ass. Her ability to read music was not tested because she had never been trained to read it. On the 22nd the patient read better than she had done since her admission, but was totally unable to write spontaneously. She could copy many letters with her left hand, but was unable to do so with the right, and had the same difficulty in directing the movements of the right hand when the eyes were shut which has been already described. The dose of iodide was increased to thirty grains three times daily. She was given a light diet (milk, fish, &c.) and a nightly dose of cascara sufficient to produce a satisfactory movement of the bowels. On the 23rd the headache was better. Her mental condition was brighter. She named a knife, pencil, keys, and button-hook correctly. She called a tuning-fork "musical tongs." Her power of reading had greatly improved. She read correctly the following sentences: "In the animals' hospital"; "The invalids"; and "Page 88." When asked to spell her Christian name she did so correctly; but when told to write it she could not make a single letter. When asked to write the letter "a" she said: "That is an 'o' with a crook." She made an "o," but could not make the letter "A" with the right hand; she was also unable to write the letter "s" with the right hand. She wrote the letter "A" with the left hand after two attempts. It will be observed that at this stage of the case her mental conception of the form of letters seemed to be retained (or perhaps it would be more correct to say regained); for example, she said that the letter "a" was an "o" with a crook, but she was nevertheless unable to write the letter "a." In other words, she was able to recall the visual memory of the letter "a" (the memory of the visual picture of the letter "a" was

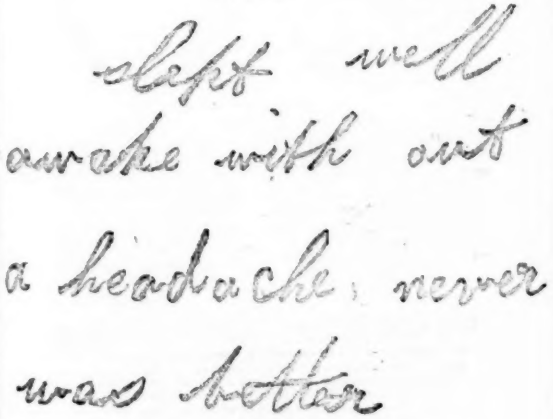
FIG. 3.


Commencement of an a with the right hand.
A with the left hand; first attempt.
=S with the right hand.
=S with the right hand.
A with the left hand; second attempt.
=S with the left hand.

Facsimile of the patient's writing on Nov. 23rd.

retained in the visual-speech centre which was acting so far as the cell group which represents the letter "a," at all events, was concerned), but she could not reproduce (in the motor-writing centre) the discharge required to produce the muscular movements concerned in writing the letter "a" (because the connecting fibres between the visual-speech centre and the motor-writing centre were still blocked by the lesion). In Fig. 3 facsimile illustrations of her writing

FIG. 4.



Facsimile of the report which the patient wrote of her condition on Nov. 27th.

(written with the right hand) at this date are given. On the 24th she slept fairly well. She on this date described the pain in the head as neuralgic in character, and said that it was much less than it had been. The constriction of the fields of vision was then markedly less than it was a week previously. (See Fig. 1, Chart 2.) She named correctly every object which was shown to her this morning; she was

also able to tell the time on a watch correctly (she had not been able to do so before); and she also wrote her own name and the word "cat" with the right hand. On the 27th she was very much better; she read to herself for the first time, and was able to write individual letters and short words with the right hand. She wrote the following report: "Slept well awoke with out a headache never was better." (See Fig. 4.) She had never been to school, and her writing and spelling were naturally very defective; she almost always spelt the word "slept" as "slepth," "slepteh," or "slepthe." When words were spelt to her she could write them down correctly. On the 29th the patient slept well and woke without a headache. She wrote the following report of the state of her health (the nurse telling her how to spell some of the words): "October 29th" (a mistake for Nov. 29th): "There is not much the matter with me when I am wishing it was dinner time before I had my breakfast a hour." On the 30th she was quite free from headache and very bright, and wrote the following report: "Had a good night; feeling fine this morning." After this date there was rapid and continuous improvement. She wrote a daily report of her state of health. The following are illustrations: "December 5th. Slepth well. No headache, but I am tired of lying in bed." "December 10th. Slepth well. No headache. I feel much stronger being up." On Dec. 15th she left the hospital. There had been no headache since Nov. 30th. At the time of her discharge her mental faculties were quite bright; her answers to questions were sharp and brisk, and she showed a good deal of mental quickness and intelligence. She could read and write as well as she had ever been able to do. The instantaneous rapidity with which she read such words as "dog," "Edinburgh," "How old are you?" "You are a good girl to-day," written on the blackboard before the students, was very remarkable when compared with her total inability to read any letters or words on the blackboard before the students three weeks previously. The fields of vision were quite normal (see Fig. 1, Chart 5); and the slight optic neuritis which was present at the time of her admission had completely cleared up. The temperature was normal. From the date of her admission until Nov. 21st the temperature had been subnormal (it averaged about 97° F.); after this it remained about normal, though slightly below it. The morning pulse at the date of her discharge averaged 58 and the evening pulse 64 per minute; this was at least ten beats per minute higher than at the time of her admission. The respirations throughout the course of the case were normal. The urine during the whole of the time that she was in hospital was perfectly normal. (The alterations in the fields of vision are shown in Fig. 1.)

Remarks.—I have now detailed the more important points connected with this case. As I have already said, it presents many features of great practical importance and scientific interest. The more important facts are that the patient at the time of her admission complained of severe headache, worse at night, mental stupidity and loss of memory (she stated that she felt as if she was in a mist), and dimness of vision, and that on examination slight optic neuritis, right-sided homonymous hemianopsia (with considerable constriction of the peripheral portions of the seeing halves of the fields), and a most marked defect in certain of the speech faculties were found to be present. The auditory-speech centre was practically normal. The motor-speech centre was practically normal. She was either unable to name many of the objects which were shown to her or gave them wrong names. When, however, an object was shown to her and a wrong name was given to it she would not accept it, but in almost all instances immediately recognised and accepted the right name of the object when it was stated to her. There was almost complete word-blindness. There was complete agraphia. She could neither write spontaneously nor to dictation any letter or word, and she could not copy any letter with the right hand. In addition there was marked inability to perform coördinate muscular movements with the right hand when the eyes were closed. She was unable, for example, to touch the tip of the nose with the right hand when the eyes were closed, but she could do so perfectly with the left hand. There was no defect of tactile sensibility, but there was some inability to distinguish the difference between weights. Almost immediately after the iodide of potassium was prescribed the headache was relieved, the mental condition cleared up, the word-blindness and agraphia disappeared, and the fields of vision gradually enlarged until at the date of her discharge they were perfectly normal. It is very interesting to note the order of recovery of the speech defects. She first regained the power of naming objects; she next regained the power of reading letters and words; but at this stage she was completely unable to write anything spontaneously, to copy letters, or to write to dictation. She was next able to read more words, and in the course of a few days to write a few individual letters. (It should be particularly noted that at a time when she was unable to write the letter "a" she appeared to have the mental picture of the letter correctly in her mind. She said that the letter "a" was an "o" with a crook.) Finally she completely regained the power of writing, and at the date of her discharge was able to write as well as she had ever been able to do. (As I have previously stated, she had never been to school and her writing is naturally very imperfect.)

The case is an illustration of almost complete word-blindness and of complete agraphia, the result apparently of a lesion involving the visual-speech centre and the connecting fibres which pass from the visual-speech centre to the motor-writing centre. It is probable, I think, that the lesion involved the connecting fibres which pass from the visual-speech centre to the motor-writing centre (at or about their point of emergence from the visual-speech centre) more markedly than the visual-speech centre itself; for the agraphia was more complete than the word-blindness, and when the word-blindness was recovered from—that is to say, at a time when the patient had regained the power of reading letters and words—she was still unable to write them. If I am correct in locating the lesion in the visual-word centre and the connecting fibres passing off from the visual-word centre to the writing centre, the case is a striking confirmation of the view which is now very generally held, that the action of the motor-writing centre is for the most part—Déjerine and Mirallié say entirely—regulated and governed by—in other words, under the direct control of—the associated sensory centre—i.e., the visual-speech centre. There can, I think, be little doubt as to the position of the lesion, and there certainly can be no doubt as to its pathological nature. The lesion was evidently a gumma. The history of the case (the stillbirth and miscarriages), the character of the symptoms (the headache, worse at night, and the slight optic neuritis), the superficial position of the lesion (if the localisation which I have suggested is correct), and the rapid disappearance of all the symptoms under large doses of iodide of potassium, conclusively proved the specific nature of the lesion. I see no reason for supposing that in this case a double lesion, involving the visual-speech centre and the motor-writing centre, was present. And if we grant that there was only one lesion, we must, I think, locate that lesion in the immediate neighbourhood of the visual-speech centre which is situated in the position of the left angular gyrus (and perhaps the left supra-marginal convolution). The combination of (1) word-blindness, (2) agraphia, and (3) hemianopsia (if we grant that there was only one lesion) showed that the lesion was situated in the region of the visual-speech centre, and not in the position of the motor-writing centre, which is by some authorities placed at the posterior end of the second left frontal convolution.[2] The lesion obviously did not entirely annul the function of the visual-speech centre, for the patient's mental image (memory) of letters and words was not altogether destroyed; but it is clear that the communication between the visual-speech centre and the writing centre was for the time totally interrupted. She was not only unable to write spontaneously, but she was unable to copy letters which were placed before her. When the agraphia was at its height this defect was much more marked in the right than in the left hand. Further, she was unable to write a single letter or word to dictation; and yet at this time she was able to understand everything that was said to her, to repeat anything which she was told to repeat, and to spontaneously make use of her motor-speech centre. In other words, while the auditory-speech centre,

[2] The existence of a separate writing-speech centre is a disputed point. Many authorities (such as the late Professor Charcot, Charlton Bastian, &c.) hold that such a centre exists and that lesions of that centre will produce agraphia without any other speech defects. Déjerine denies the existence of a separate writing-speech centre as distinct from the ordinary motor centres for the movements of the hand, &c., and in support of this view quotes the fact that no case has yet been recorded of pure agraphia without other speech defects, and no undoubted case has been placed on record in which a lesion of the second left frontal convolution (the supposed writing-speech centre) has produced agraphia alone.

the motor-speech centre, and the connecting fibres between these two centres appeared to be intact she was unable to write to dictation, or, to put it another way, the communicating (commissural) fibres between the auditory-speech centre and the writing centre, which in persons who are accustomed to write little,[3] as was the case in this patient, seem to pass through the visual-speech centre in order to reach the associated motor (writing) centre, were interrupted. As I have already more than once stated, there was absolutely no difficulty in articulation and speaking. When the mental stupidity which was present at the commencement of the case passed off there was absolutely no difficulty in immediately understanding everything which was said to her. Her answers to spoken questions were sharply and quickly given. My reason for locating the lesion in the neighbourhood of the angular gyrus is the combination of word-blindness and agraphia with right-sided homonymous hemianopsia.

Right-sided homonymous hemianopsia may, of course, be due to a lesion in a variety of situations (left optic tract, radiating fibres of Gratiolet, half vision centre in the back part of the occipital lobe). A lesion of the optic tract which produces hemianopsia does not produce word-blindness or agraphia. A lesion in the half-vision centre in the back part of the occipital lobe produces hemianopsia, but does not produce word-blindness or agraphia. Amongst the cases which have been reported in support of this proposition there is none more striking and conclusive than one which I have already published.[4] The case was one of embolism of the posterior cerebral artery occurring in the course of mitral stenosis. The patient was a female aged forty-seven years. The onset of the cerebral attack was attended with sudden loss of consciousness, followed for a fortnight by a condition of mental stupor and apparent inability to realise the nature of her surroundings, and resulting in permanent right-sided homonymous hemianopsia. The diagnosis, made a fortnight after the onset of the attack (when the patient's mental condition allowed of complete and satisfactory examination, the mental stupor having passed off), was embolism of the left posterior cerebral artery and softening of the half-vision centre (left cuneus) in the tip of the left occipital lobe. There was no word-blindness and no agraphia; in short, no aphasia of any kind or form. The patient lived for two years, and then died from a second apoplectic seizure. On post-mortem examination the diagnosis originally made was fully confirmed. There was a localised softening of the left cuneus and tip of the left occipital lobe and secondary descending degeneration sharply confined to the optic radiations of Gratiolet on the left side. (Plates showing photographs of the brain and the hemianopsia are published with the clinical and post-mortem record.)[5]

The combination of word-blindness with hemianopsia points to a lesion above (i.e., on the higher—the cerebral rather than the ocular side, so to speak, of) the half-vision centre—to a lesion involving either (*a*) the fibres passing from *both* half-vision centres in the tips of the occipital lobes to the left angular gyrus (visual-speech centre), or (*b*) the left angular gyrus visual-speech centre) itself. In those cases in which the lesion involves the angular gyrus itself and in which there is hemianopsia the hemianopsia is due to implication of the radiating fibres of Gratiolet, which pass immediately subjacent to the angular gyrus in their course to the half-vision centre in the back part of the occipital lobe. This case, therefore, seems to support the generally accepted view that there is a higher visual centre above, so to speak, the half-vision centre, which is concerned with visual speech.

It will be observed that in this case, in addition to the right-sided hemianopsia, there was considerable constriction of the unaffected (left) halves of the fields of vision. Several years ago I suggested that lesions in the neighbourhood of the angular gyrus—i.e., lesions above the half-vision centre in the occipital lobe—are probably attended with such peripheral constriction, while lesions which involve the half-vision centre itself do not produce such peripheral constriction. This case seems to support this supposition. The question is, however, one of much difficulty and complexity. I have met with cases which seem to disprove it. See, for example, a case of sensory "Jacksonian" epilepsy, in which a discharging lesion of the half-vision centre in the occipital lobe (verified by post-mortem examination) produced flashes of light followed by hemianopsia.[6] But it must be remembered that word-blindness does not necessarily, in fact does not usually, entail agraphia. Cases are not very uncommon in which a patient who is able to write fluently is yet absolutely unable to read a single word which he has written. It is extremely difficult to explain these differences (e.g., the facts that (*a*) in some cases of word-blindness the patient is able to write fluently and well and yet unable to read what he has written; and (*b*) that in other cases of word-blindness there is complete agraphia) if it be granted (but, so far as I know, this has not yet been proved by post-mortem examination) that in both cases—i.e., (1) cases of word-blindness without agraphia, and (2) cases of word-blindness with agraphia—the lesion may be situated in the angular gyrus. An explanation which at one time suggested itself to me is that the writing centre in the left hemisphere of the brain (second right frontal convolution) is governed by (under the action of) the higher visual centre (situated in the region of the angular gyrus) in each hemisphere; but that the visual perception of written speech characters is located in one, the left, visual centre alone (the region of the left angular gyrus). But this theory is not a satisfactory one. It may, and probably does, afford one explanation of the fact that many word-blind patients who are unable to write spontaneously (from within) can mechanically copy letters and words; but it does not explain the fact that many patients who are word-blind (who are unable to read) can write fluently, for in such cases the visual memories of letters and words must be retained (unless the patient can write by the memories of the kinæsthetic impressions which are generated in the act of writing); and if the visual memories of letters and words (of written speech) were retained in either visual speech centre, and that centre were still in active functional connexion with either half vision centre, the patient would be able to read.

Another view, which until recently was generally accepted and which is still thought by many authorities to be the correct one, in some cases at all events, supposes that in those cases of word-blindness in which there is no agraphia the motor act of writing has become so habitual, so automatic as it were, that the patient is able to write without the supervision of the visual speech centre, by means, perhaps, of the memories (revival) of the kinæsthetic impressions connected with the act of writing. While in those cases of word-blindness in which there is agraphia the supervision and stimulation, so to speak, of the motor-writing centre by the visual-speech centre is essential, without this supervision the act of writing in such cases cannot be performed. This theory would receive striking confirmation if it could be shown, firstly (as was notably the case in our patient), that in all cases of word-blindness in which there is agraphia the patient has been accustomed to write very little (i.e., is in the position of a child who is just learning to write and in whom the discharge of the motor-writing centre has to be constantly directed by the aid of vision—that is, of the visual-word centre); and, secondly, that in all cases of word-blindness without agraphia the patients have been in the habit of writing much and with facility.

Another theory is that in cases of word-blindness with agraphia the lesion is situated in the visual-speech centre, the left angular gyrus, and perhaps the left supra-marginal convolution; whereas in cases of word-blindness without agraphia the lesion does not involve the visual-speech centre itself, but involves the connecting fibres which pass to the visual-speech centre from *both* half-vision centres in the back part of the occipital lobes. This theory is supported by three cases which have been recorded by Déjerine, Redlich, and Wyllie, and seems to be accepted by Dr. Wyllie as conclusively proved. Dr. Wyllie says: "It has recently been shown quite conclusively that the visual images at C [visual-speech centre] are in all cases important, not only for the reception and interpretation of written and printed

[3] In some cases of word-blindness in which the patient is unable to write spontaneously (i.e., from within as the result of stimulation from the visual-speech centre) the power of writing to dictation is preserved. In such cases it is reasonable to suppose that there is a direct connexion between the auditory-speech centre and the motor-writing centre. In persons who are accustomed to write much, and especially in persons who are accustomed to write much to dictation, it is probable that the motor writing-speech centre may be thrown into action either by the visual-speech centre or by the auditory-speech centre.

[4] Bramwell: Atlas of Clinical Medicine, vol. ii., p. 40.

[5] Ibid., Plates xxxvi., xxxvii., xxxviii.

[6] Ibid., p. 42.

speech, but also for the production of writing. It has been shown, in fact, that when the centre C [visual-speech centre] is destroyed the patient can neither read nor write. As to reading, he is word-blind; as to writing, he has amnesia literarum, and therefore cannot call up in his mind the visual images of letters and words required for purposes of writing. It is now considered to be improbable that the graphic-motor images at D [motor-writing centre] can in any single case be so strongly imprinted as to suffice for the act of writing independently of any guidance from the visual images at C [visual-speech centre]. How, then, are the cases of pure word-blindness without agraphia—in which the patient can write correctly, though he cannot read even that which he himself has written—to be accounted for? It is now believed that in these cases the visual-word centre C remains intact, and that so also do the pathways for the influences by which it is acted upon *from within* when words revived in the mind are being translated into writing; but that, on the other hand, the pathways along which, as we shall see presently, influences pass from the primary visual centres, in the two occipital lobes, to the visual-word centre C, in the angular and supra-marginal convolutions, are cut across, so that the word images in C, though they can still be revived *from within*, can no longer be reached and revived by impressions coming to them *from without*. Destruction of the visual-word centre C, therefore, causes both word-blindness and agraphia; but the cutting off of the visual-word centre C from the primary visual centres in the two occipital lobes causes simple word-blindness without agraphia."[7] The arguments which Déjerine and Mirallié advance against the existence of a separate writing-speech centre, lesions of which will cause pure agraphia, are undoubtedly very strong. Future observations will, no doubt, decide the point definitely one way or the other, and determine whether the memories of the muscular movements (kinæsthetic impressions generated during the production of the movements concerned in the act of writing) may not in some cases be alone sufficient to enable a patient who has been accustomed to write much to write at all events in some degree. But I will leave the discussion of this difficult and debateable point until I come to consider the subject of aphasia as a whole.

The point, then, of most importance which this case seems to illustrate is that a lesion involving the conducting fibres which pass from the visual-speech centre to the motor-writing centre, in a person who has been accustomed to write little, produces a condition of complete agraphia (inability to write spontaneously, to copy, or to write from dictation). In other words, this case seems to suggest that a lesion which completely interrupts the connecting fibres which pass from the visual-speech centre to the motor-writing centre (whether that centre is a separate writing-speech centre, as Charcot and Bastian suppose, or merely the ordinary motor centre for the movements of the right hand, as Déjerine thinks) will produce agraphia, leaving internal visual speech unaffected. If this is so, and if Déjerine's views are correct, we may therefore say that:—1. A lesion which interrupts the conducting fibres which pass from both half-vision centres to the visual-speech centre (left angular gyrus) will produce complete word-blindness, but no agraphia. In these cases the patient is unable to read printed or written characters; he can write spontaneously, but he is unable to read what he writes. 2. A lesion which completely destroys the visual-speech centre itself (left angular gyrus) will produce complete word-blindness and complete agraphia (unless, as Charcot and Charlton Bastian, &c., suppose, the kinæsthetic memories are alone sufficient to enable the patient to write; but this, as we have seen, is very doubtful). 3. A lesion which completely interrupts the fibres which pass from the visual-speech centre (angular gyrus) to the motor-writing centre will produce pure agraphia—agraphia without word-blindness. If such a lesion occurs, it must be very rare. Further (4), if a separate writing-*speech* centre exists (but, as I have already stated, its existence is stoutly denied by Déjerine) complete destruction of this centre and of this centre alone will produce pure agraphia—agraphia without word-blindness. Complete destruction of the visual-speech centre usually entails, as Déjerine and Mirallié have shown, other speech defects (in auditory and vocal speech); but I need not refer to them at present. I merely refer to the defects in visual speech and in writing.

It will be noted that in this case there was no disturbance of tactile sensibility, but there was distinct loss of the muscular sense and power of coördinating the movements in the right upper extremity when the eyes were closed, and yet there was absolutely no paralysis and the grasping power of the two hands was unimpaired. The patient had lost the mental idea of some of the movements of the right hand; when the eyes were open she could coördinate her movements correctly, but when the eyes were closed she was unable to touch the tip of the nose with the left fore-finger. It is difficult, perhaps, to give an explanation of these facts (granting that the lesion was confined to the position of the angular gyrus), unless it be supposed that the cortical grey matter in the neighbourhood of the higher centre for vision exercises an important influence upon the co-ordination of muscular movements of the right hand, not only in those movements concerned in the act of writing, but other movements, such as touching the tip of the nose. And in this connexion it is important to note that Nothnagel and others have suggested from the observation of clinical cases that "the parietal lobe in its inferior part contains a centre for the registration of motor residua (as Dr. E. C. Seguin terms the ingoing or kinæsthetic impressions which attend and result from muscular movements), and that the centres in the motor zone are really motor centres."[8] And here let me state that some word-blind patients are able to read by tracing the letters and words (which they cannot decipher, so to speak, by the sense of sight) with the fore-finger either on paper or in the air—in other words, by the revival in consciousness of the kinæsthetic impressions attending the act of writing. Déjerine and Mirallié state that this is only possible in cases of subcortical or pure word-blindness. This fact seems to me to suggest that the cortical centre in which the kinæsthetic impressions connected with the act of writing are stored is the angular gyrus or adjacent part of the supra-marginal convolution. And in support of this supposition, which, so far as I know, has not been advanced before, is the fact that in this case of word-blindness and agraphia, the result apparently of a lesion in the visual-speech centre and its immediate neighbourhood, there was definite incoördination of the movements of the right hand. According to this view, both the visual and kinæsthetic impressions concerned in the act of writing are stored up in the same or closely adjacent cortical centres. If future observations should show that this supposition is correct many of our present difficulties with regard to agraphia would be easily explained.

It is impossible, of course, to believe that in this case, in which such rapid improvement occurred under anti-syphilitic treatment, there was any "destroying" lesion. The only explanation of the rapid recovery from the complete condition of agraphia and almost complete visual word-blindness which were present is, I think, that there was a specific lesion on the surface of the brain in the region of the left angular gyrus which temporarily arrested or inhibited (either by pressure or by interfering with the blood-supply, or in both ways) the function of the angular gyrus, and more especially of the connecting fibres passing from it (the visual-speech centre) to the motor-writing centre. Further, the case is certainly one of the most remarkable illustrations which has come under my own personal observation of the extraordinary effect which large doses of iodide of potassium have on gummatous lesions.

The case shows the great importance of testing the fields of vision and the patient's power of reading and writing in all obscure cases of cerebral disease.[9] I have met with other cases which also strongly support the same proposition. I will take an early opportunity of detailing some of them and of discussing the whole subject of aphasia more fully.

(To be continued.)

[7] The Disorders of Speech, by Dr. John Wyllie, p. 333.

[8] See Abstract on Cerebral and Spinal Localisation, by Dr. E. C. Seguin, in Sajous' Annual of the Universal Medical Sciences, 1888, vol. i., p. 4.

[9] In some cases the mental condition of the patient unfortunately renders it impossible to get a perimeter chart or even to ascertain the condition of the fields of vision by the rough test.

HEALTH OF HORFIELD.—At the meeting of the Horfield Urban District Council, Horfield, Bristol, held on Feb. 23rd, Mr. J. H. Parry, L.R.C.P. and S. Edin., the medical officer of health, presented his annual report, which stated that 328 births had been registered during 1896, being at the rate of 28·5 per 1000. The deaths numbered 129, or at the rate of 11·2 per 1000; of these 35 were in infants under one year, and included 10 from premature birth.

ON THE RADICAL CURE OF HYDROCELE BY EXCISION OF THE SAC, WITH NOTES OF TWENTY-TWO CASES.

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IN previous numbers of THE LANCET[1] I have recorded several instances of radical cure of hydrocele by excision of the sac, and called attention to the good results attending this mode of treatment, which I have now adopted in twenty-two cases, brief particulars of which will be found in the table given below. A consideration of these cases may perhaps be of interest, as they serve to illustrate the chief conditions which call for the performance of this operation.

TABLE OF CASES OF RADICAL CURE OF HYDROCELE BY EXCISION OF THE SAC.

No.	Age.	Date of operation.	Nature of hydrocele.	Previous treatment.	Remarks.
1.	47	June, 1886.	Vaginal.	Tapped four times.	—
2.	40	April, 1887.	,,	Tapped seven times; injected once with carbolic acid.	The sac wall was very thick.
3.	53	May, 1887.	,,	Tapped three times.	—
4.	38	July, 1887.	,,	Tapped three times.	—
5.	58	January, 1888.	,,	Tapped eight or nine times.	Suppuration in the tunica vaginalis after last tapping; sac wall thick and inflamed.
6.	44	July, 1888.	,,	Tapped several times; injected once with iodine.	Testis adherent to the anterior wall of the tunica vaginalis.
7.	55	February, 1889.	,,	Tapped three times.	Sac wall cartilaginous, from a quarter to half an inch in thickness.
8.	45	February, 1891.	,,	Tapped twice.	Multilocular hydrocele.
9.	25	March, 1891.	Encysted.	None.	Present for many years; size of orange; thick sac wall.
10.	62	April, 1891.	Vaginal.	Tapped twice quite recently.	Twenty years' duration; sac wall calcified; scrotum gangrenous; pus in the tunica vaginalis; radical cure of inguinal hernia on same side also performed.
11.	23	May, 1891.	,,	Tapped twice; injected once with iodine.	Hæmorrhage into the tunica vaginalis after last tapping; thick sac wall.
12.	31	December, 1891.	Encysted.	None.	Size of orange; radical cure of inguinal hernia on the same side also performed.
13.	45	May, 1894.	Vaginal.	Tapped three times.	—
14.	51	October, 1894.	,,	Tapped twice quite recently.	Bloody fluid drawn off at the second tapping, followed by suppuration in the sac and sloughing of the sac wall.
15.	31	February, 1895.	,,	None.	Present for several years; recently contracted gonorrhœa, followed by acute epididymitis and suppuration in the tunica vaginalis; the sac wall was thick and inflamed.
16.	54	February, 1895.	,,	Tapped twice recently.	Many years' duration; blood drawn off at the second tapping; re-filled rapidly. The tunica vaginalis contained blood-clot and fluid; the sac wall was very thick.
17.	18	August, 1895.	,,	Tapped several times; injected once with perchloride of mercury.	The sac wall was thickened.
18.	18	March, 1896.	Encysted.	None.	—
19.	22	June, 1896.	Vaginal.	,,	Bilocular hydrocele; radical cure of inguinal hernia on the opposite side also performed.
20.	7	July, 1896.	Encysted.	Tapped twice.	Present since infancy; size of small orange; thick sac wall.
21.	62	August, 1896.	Vaginal.	None.	Several years' duration.
22.	33	September, 1896.	,,	,,	Present since boyhood.

Briefly described, the operation is carried out in the following way. The cavity of the tunica vaginalis is laid open by a vertical incision, from two to three inches in length, made from the front through the tissues of the scrotum. The fluid contents of the hydrocele having escaped, the tunica vaginalis is dissected out on either side up to the point where it is reflected on the testis and lower part of the cord. The whole of the parietal layer is then removed by cutting through it close to its reflection upon the cord and testis with a pair of scissors. All bleeding having been arrested, the wound is then closed, no drainage having been employed in my recent cases, and if pressure is maintained by pads of wood-wool so as to keep the deep parts of the wound in apposition, and the scrotum is afterwards kept well elevated, healing quickly takes place, and at the end of ten days or a fortnight the patient is usually able to get about wearing a suspensory bandage. Though some thickening remains at the seat of operation for a time it gradually subsides, and in the course of a few months the scar will have almost disappeared, the scrotal tissues moving so freely over the surface of the testis that it is often difficult to detect that any operation has been performed. In cases of encysted hydrocele the operation differs only in the fact that the entire sac is removed. The chief conditions which call for the performance of this operation are as follows:—1. When a patient is anxious for a radical cure, but does not wish to run the risk of an unsuccessful attempt by injection. It was for this reason that excision of the sac was performed in many of the cases. 2. Old hydroceles, where the sac wall is thickened and rigid, and consequently incapable of completely collapsing after the fluid is drawn off by tapping. It is under these conditions that the treatment by injection is liable to fail. Considerable thickening of the sac wall was present in many of the cases, while in Cases 2 and 7 this condition was very marked, the tunica vaginalis being in places more than a quarter of an inch in thickness and of cartilaginous consistence. In Case 10, where the hydrocele had existed for a period of twenty years, the sac wall was in addition distinctly calcified. 3. When injection has been tried and failed. In Case 2 the hydrocele had been previously injected with carbolic acid; in Cases 6 and 11 iodine had been used, and in Case 17 perchloride of mercury, but in each instance without success. 4. When suppuration has taken place in the sac of a hydrocele after its contents have been removed by tapping. This complication, which is liable to occur after evacuation of the fluid in old hydroceles, was present in Cases 5, 10, and 14, and in each the tunica vaginalis was in an inflamed and unhealthy condition. In one instance, Case 10, the scrotal tissues over the front of the swelling were distinctly gangrenous. In Case 14 the sac was at first incised and drained, but as the discharge, which was mixed with broken-down blood clot, showed no signs of abatement

[1] THE LANCET, Sept. 10th, 1887; Oct. 26th, 1889; and July 25th, 1891.

the tunica vaginalis was afterwards excised and the wound closed, with the result that healing took place without any further suppuration. In Case 15 suppuration had occurred in the sac of an old hydrocele as the result of an attack of gonorrhœal epididymitis. 5. When a hæmatocele follows the operation of tapping a hydrocele. This complication was present in two instances, Cases 11 and 16, the thickened condition of the sac wall, which was incapable of collapsing, doubtless accounting for the occurrence of the bleeding. 6. When a hydrocele is associated with an inguinal hernia upon which it is desirable to perform a radical cure. Both these conditions were present in Cases 10, 12, and 19. 7. Two rare conditions in which the operation proved extremely useful were those found in Cases 6 and 8—viz., (*a*) an adherent condition of the testis to the anterior wall of the scrotum, where it formed a distinct prominence, the result of previous tappings and an unsuccessful injection with iodine; and (*b*) a multilocular hydrocele, the cavity of the tunica vaginalis being divided by numerous septa into distinct compartments, a condition which could not be satisfactorily treated by any other measure than by excision of the sac. 8. In cases of encysted hydrocele the entire sac can be excised, and the whole of the secreting surface is therefore removed, as in Cases 9, 12, 18, and 20. A reference to the table will show that advanced age is no bar to the operation, five of the patients being over fifty and two over sixty years of age. As regards the result of the operation, I have not met with a single case where there has been a recurrence of the hydrocele; and provided it is carried out in the way described, care being taken to remove the whole of the parietal layer of the tunica vaginalis, I am of opinion that excision of the sac is the only certain method of radical cure.

Manchester.

FOREIGN BODY IN THE LENS FOR SIXTEEN YEARS, THE LENS REMAINING CLEAR.

BY T. BRITTIN ARCHER, M.R.C.S. ENG.,
SENIOR SURGEON, CENTRAL LONDON OPHTHALMIC HOSPITAL.

A MAN, aged thirty years, married, of healthy appearance, with good family history, and an intelligent person, came to the Central London Ophthalmic Hospital on Sept. 17th, 1896, complaining that when he was reading a paper four days previously he noticed that there appeared to be a cloud over the left eye, which somewhat obscured the print whilst reading, and the cloud had remained up to the date of coming to the hospital. Nothing peculiar was observable about the eyes by daylight. Tension was normal in both, the pupil reflexes were all present, both eyes were quiet, and there was no inflammation. He had had no blow on the eye or accident of any sort. Right vision = $\frac{6}{6}$ without glass, Jaeger No. 1 up to 14 centimetres; left + 1·75 = $\frac{6}{18}$, Jaeger No. 8 at 25 centimetres indistinctly without glass. He was positive he could see quite well with the left eye up to four days before. On examination in the dark room, the left lens was found to be cataractous, with many well-marked striæ, stellate, partially obscuring the fundus; at the posterior part of the lens was seen, indistinctly by reason of the striæ, what appeared to be a fine piece of glittering wire, with a small spot of opaque posterior capsule immediately behind, and forming a white background to the assumed foreign body. The object was, allowing for it being seen under a high lens, about three millimetres long and half a millimetre broad, lying nearly vertically as regards its length in the lens, inclined slightly towards the temporal side, and having the lower extremity slightly curved forwards. On the anterior surface of the iris (a blue-grey one), in the lower and nasal quarter segment of the iris circle, was a fine blue-black line about a millimetre long running parallel with the pupillary border of the iris, and half-way between that border and the ciliary border, but rather nearer the pupillary border. There was no opacity in the cornea. The right fundus was normal. The patient could not at first recollect any accident to the eye, but on pressure he suddenly remembered that sixteen years previously, when he was fourteen years of age, he filled a bit of old gas-pipe with gunpowder and it prematurely exploded by accident. This occurred to the right side of the face, on which are two powder marks, but he declared that neither of his eyes was in any way affected by the explosion. As it was doubtful at this first visit what the object was, atropine drops were ordered and he was told to come again in four days. On the 21st the left lens had become more opaque. Vision = $\frac{6}{36}$. The foreign body could not be seen so distinctly; the fundus was quite obscured. The specific gravity of the urine was 1024; it was acid, and there was no albumin or sugar. The eye was quiet. The patient was admitted to the hospital with a view to the extraction of the lens and the foreign body. On the 24th, on examining the lens, the opacity had entirely cleared up, save very small and short striæ at the periphery; the foreign body stood out clearly to the view in the lens; the fundus was easily seen and was normal; and the vision with + 1·75 was $\frac{6}{12}$ two letters. In face of this extraordinary condition the operation was postponed. On Oct. 1st the vision = $\frac{6}{36}$; the opacity of the lens returned and increased. The foreign body seemed to have shifted slightly with regard to the opaque spot in the capsule behind it. The eye was quiet and the lens seemed to be rapidly softening. On the 5th the lens (left) was removed by a semilunar incision at the sclero-corneal junction with an iridectomy. The lens was very fluid, slightly milky in colour, and easily delivered; one small drop of vitreous presented, which was incised. This was probably due to the posterior capsule being lacerated by the foreign body or from degenerative changes set up from the original impact; it tore on delivery of the lens. On examination of the débris of the lens, which had lost all its form, no foreign body was discovered, but on raising the upper lid it was found resting on the ocular conjunctiva just above the section, having been delivered with the lens. On the 6th the eye was quiet and remained so until the 15th, when the patient was discharged, the eye having made a rapid recovery from the operation. Vision + 10 D. = $\frac{6}{6}$. There was some small amount of soft lens matter remaining, but not sufficient to obscure the fundus. On the 29th the eye was quiet. Vision + 10 = $\frac{6}{12}$. On Nov. 23rd vision + 10 = $\frac{6}{6}$. There was a fine thread of capsule intersecting the pupil.

Dr. Norman Maclehose, pathologist to the hospital, reports on the foreign body: "There is no possible doubt as to the fragment being iron or steel; it is heavy, sinks rapidly in water, slowly in glycerine, is strongly attracted by the magnet. There are one or two fine filaments of wool or cotton adhering to it, but no evidence of incrustation with new cells or organic matter. The foreign body measures 2½ mm. long and ¼ mm. broad."

Remarks.—There seem to be many points of interest with regard to this case. First, as to how the foreign body got into the lens. It is assumed that the fragment was shot into the man's eye when he was aged fourteen years by the explosion of the loaded gas-pipe, and it seems difficult to refuse this explanation of its presence, backed up by the local evidence. This is the solitary accident in the man's life. There are powder marks on the right cheek and presumably a charred powder stain on the iris of the left eye, in a line with the direction the foreign body would take in travelling from right to left. That there is no corneal opacity is not important, as the original wound would be very small, and time (sixteen years) could well obliterate it. That the stain on the iris is not physiological may safely be accepted as its plane runs at right angles to the course it ought to pursue were it so, and also from its peculiar coal blackness. Presuming that the foreign body passed from right to left, pierced the cornea at its sclero-corneal junction, passed through the iris, and lodged in the posterior part of the left lens, and taking into account the position in which it lay, then there is local evidence all along the line of this theory of its presence. Secondly, it set up no irritation at the time. The size may account for it not setting up any change in the lens at first, and one can best realise what that size was by describing it, when viewed by the naked eye on a bit of white notepaper, as like half of a small eyelash. Its real measurement has been given. Thirdly, that for sixteen years the lens remained clear. Of course the man's statement has here to be believed, but he ought to be a good judge on this point, he being a carpenter, an occupation in which at times of taking measurements (antero-posterior) binocular vision is almost a necessity, and he would soon have found it out if one eye was failing. His statement of its discovery is very clear, and luckily when the lens changes did come they were watched by three skilled ophthalmoscopists and seen

to be very rapid. Doubtless there were always the slight opacity in the posterior capsule and the opacity of the foreign body itself, but these were not sufficient to interfere with good vision. What did start the secondary softening is doubtful; probably some jar or contusion experienced in following out his trade of which he took no notice. Lastly, that the lens during its softening cleared temporarily after having become opaque is difficult to explain. That it did occur is beyond dispute, as the condition was corroborated by three observers, and though perhaps one could easily put forward several theories to account for it, still they would lack the evidence of absolute certainty.

The lens on its delivery was placed inadvertently on a towel that covered the cushion on which the patient's head rested and, being entirely fluid, soaked immediately away. This is to be regretted, as no examination of it was made.

Nottingham-place, W.

NOTE ON A SKIAGRAPH OF A CASE OF FRACTURED FEMUR.

BY SURGEON-COLONEL W. F. STEVENSON,
PROFESSOR OF SURGERY,
AND
SURGEON-MAJOR WHITEHEAD,
LATE ASSISTANT PROFESSOR OF SURGERY, ARMY MEDICAL SCHOOL, NETLEY.

THIS skiagraph has, we consider, certain points of interest about it. At first sight it appears to be a picture of a recent fracture of the lower end of the femur in which a considerable amount of deformity and over-riding of the lower end of the upper fragment exists, whereas it really represents the present condition of the bones in a case of fracture close above the knee-joint which

Skiagraph of knee-joint and portion of femur. The site of fracture is clearly shown and the lower end of the upper fragment appears very sharp. For explanation of this see text.

occurred six months ago. The points worthy of attention connected with it are—(1) the end of the upper fragment appears jagged and sharply defined, as one might expect to see in a recent case—quite as much so as was depicted in a skiagraph of the same case taken by Mr. Sydney Rowland a few days after the accident happened; no attempt has apparently been made by nature to round off the end of the bone; (2) on examination of the limb no projection of the bone can be felt at the site of fracture; the union appears to be smooth and even; (3) the shortening amounts to barely half an inch; (4) the man walks without any sign of lameness; and (5) he feels no pain in the part. From the surgical point of view, the result is as good as could be expected under the circumstances of a fracture in the position indicated. That the bone is in fact as sharp as it appears in the skiagraph we do not believe; what probably has occurred is that the x rays have traversed the more recent callous material, which really does round off the end, without throwing a shadow on the plate, while the older bone is clearly defined.

Mr. Edmund Owen[1] suggests a misuse to which skiagraphy may be put in the future when he remarks, *apropos* to a similar case of his own: "What may a British jury think when a skiagraph of some case is being explained by the sharp advocate of a claimant for damages for malpraxis?" The x rays exhibited in Mr. Owen's case an apparent deformity which "really did not matter," as the result was otherwise as good as surgery could achieve, and the above would seem to be another case in point. The surgeon is, in fact, liable to find himself "given away," and imaginative patients to consider themselves badly treated, if they have their broken bones skiagraphed by Roentgen's method.

Netley.

"A QUESTION FOR ANÆSTHETISTS."

PNEUMONIA AFTER SURGICAL OPERATIONS: AN ANÆSTHETIST'S POINT OF VIEW.[2]

BY J. FREDERICK W. SILK, M.D. LOND.,
ANÆSTHETIST TO KING'S COLLEGE HOSPITAL AND TO GUY'S HOSPITAL DENTAL SCHOOL.

IN THE LANCET of Feb. 20th, 1897, under the heading "A Question for Anæsthetists," Mr. Clement Lucas states that in his experience, pneumonia after surgical operations is of too frequent occurrence to be explicable either upon the hypothesis of prior infection, or on that of simple exposure to cold; that pneumonia is as invariably the result of germ infection as is tubercle; and the question he raises, therefore, is—May not the masks and face-pieces used in the administration of the anæsthetic be a possible source of infection? Surgeons in general and anæsthetists in particular must, I am sure, feel indebted to Mr. Lucas for the candid manner in which he has brought the matter before them.

The frequency of pneumonia after operations.—As I read the paper, cases of transitory bronchial irritation are not referred to, but only those graver inflammatory conditions involving elevation of temperature and other definite signs of marked pneumonia. Is it a fact that such cases are really of frequent occurrence in modern non-septic surgery? In the days before anæsthetics and antiseptics pneumonia was a well-recognised and most frequent cause of death after surgical injury and operation, and the fact is constantly referred to by the medical writers and lecturers of the time. For instance, in the Guy's Hospital Reports for 1843 is a paper by Dr. Norman Chevers dealing with the different causes of death after operations; pneumonia is given a prominent place in the list, and some observations of Erichsen are quoted in which the latter states that of forty-one deaths after surgical injury no less than twenty-three exhibited signs of pneumonia. On the other hand, it is really remarkable how silent the statistics of modern surgery are upon the subject—in fact, it may be said that it is the legitimate boast of surgeons nowadays, founded upon well-authenticated published records, that elevation of temperature, from whatever cause, is distinctly exceptional after operations. In the St. Bartholomew's Hospital Reports for 1895 there are tabulated records of 1774 operations; in those of St. Thomas's Hospital for 1894 there are 1376; in those of King's College Hospital, vol. ii., 1895-96, there are 915; and in those of Middlesex Hospital, 1894, there are 912. Out of this total of nearly 5000 I have with some difficulty found references

[1] THE LANCET, Aug. 29th, 1896.

[2] A paper read before the Society of Anæsthetists on March 18th, 1897.

to about thirteen cases of pneumonia; of these, no less than eight were jaw or tongue cases, two were in rectal operations, in one a foreign body was subsequently found in the bronchus, and one was a case in which cough and a slight rise in temperature were, apparently, the only signs of pneumonia. Practically, therefore, we have but one case in 5000 which is at all parallel to the case cited by Mr. Lucas as typical. Further, Prescott, in discussing this very subject in the *Boston Medical and Surgical Journal* for 1895, comes to the conclusion that in an estimated 40,000 cases of etherisation there were only three cases of acute lobar pneumonia. Judging from these sources of information, therefore, Mr. Lucas's experience seems to be very exceptional, and one is almost inclined to commiserate him; but possibly, now that attention has been directed to the matter, the records of future years will show a few more cases, so that after all there may be some justification for the view that cases of pneumonia (as distinguished from bronchial irritation) occur with undesirable frequency. At present, however, the belief in the occurrence of pneumonia after surgical operations appears to be a traditional survival of the pre-anæsthetic and pre-antiseptic days.

The bacillary origin of pneumonia.—If simple bronchial troubles as well as those of a pronounced pneumonic type are included, it must first be shown that there is a specific micro-organism which is the *causa causans* of such conditions. Whatever may be the theoretical probabilities of this, I hardly think that any bacteriologist is prepared as yet to proclaim the discovery of the bacillus of bronchitis. With regard to the bacillus of pneumonia it may be pointed out that Crookshank and Sternberg, in their respective text-books, enumerate no less than three micro-organisms which are said to produce, or are at any rate present in the sputum of, pneumonia—viz., the pneumococcus of Friedlander, an altogether different one of Sternberg, and a third of Klein; and not only so, but it seems to me that the inoculation experiments with any one of these are by no means conclusive, or even uniform. Add to this the fact that one or other of the specific forms referred to is often found in the normal buccal débris, and then I think that we can hardly come to any other conclusion than that, from the point of view of infective organisms, our knowledge of the subject is still very incomplete; it does not carry us much further than the stage of probabilities, or entitle us to say much more than that the pathological conditions and secretions of pneumonia furnish very suitable media for the growth of the organisms in question.

Masks and face pieces as a source of infection.—Assuming for the sake of argument that cases of pneumonia after operations are of tolerably frequent occurrence and that such cases are always due to infective organisms, I would submit that of all places such organisms are least likely to be found in the masks and face-pieces of the anæsthetist. Sternberg, in his "Text-book of Bacteriology," quotes some interesting experiments which tend to support this view. Prolonged exposure to nitrous oxide, though it did not absolutely destroy some organisms that were experimented upon, materially interfered with their development and restrained their growth. Anthrax spores, the most obstinate of known organisms, were not absolutely destroyed by immersion in chloroform, but the cholera bacillus, the typhoid bacillus, and the anthrax bacillus were killed in a very short time when placed in weak watery solutions of the drug (from ¼ to ½ per cent.). Ten minutes' exposure to ether destroyed tubercle bacilli. Then, again, it is very well known that absolute alcohol (a constituent of the A.C.E. mixture) is rapidly and permanently fatal to nearly all micro-organisms. I do not know of any experiments that have been made with the organisms contained in pneumonic sputum, but there is no reason to doubt that the result would be in accord with the above. It is not a little curious, too, that the least potent of the drugs referred to, both from the anæsthetist's and from the bacteriologist's point of view,—viz, nitrous oxide—is the one which is probably used more frequently than all the others put together, and under conditions which would be most likely to convey infection. Except when a foreign body has slipped into the trachea it has never, to my knowledge, been recorded, that the use of nitrous oxide has been followed by anything approaching pneumonia. On the other hand, chloroform, the most powerful of anæsthetics and a very strong antiseptic, which is used without a mask, is the anæsthetic most frequently employed in septic jaw and tongue cases, in which the mortality from pneumonia is exceptionally high

Although I cannot agree with Mr. Lucas in his deductions I should like very cordially to endorse his views as to the desirability, for several reasons, of scrupulous cleanliness whether in the matter of surgical instruments or inhalers. As he is not an anæsthetist it is of course excusable that he should have overlooked several improvements in apparatus, tending to facilitate cleaning, that have been introduced of late years. Among others I would mention the following—viz., as far back as 1887 Mr. Lloyd suggested a light, inexpensive, destroyable bag for use with the portable Clover's inhaler; Dr. Dudley Buxton has adopted an easily cleaned bag for the larger Clover's inhaler; and Mr. Davis has brought forward a metal inhaler of the Ormsby pattern. I venture to think, too, that the celluloid inhalers for the A.C.E. mixture, which I introduced some years ago, are steps in the same direction; and further, some two years or so ago I placed in the operating theatre of Guy's Hospital, and showed at a meeting of the Society of Anæsthetists, a form of metal inhaler, one of the advantages which I claimed for it being that it met the demand for an inhaler which could be subjected to the same aseptic treatment as the instruments employed in the operation.

6, Devonshire-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF IMPALEMENT.

By JOHN JOSEPH STACK, L.R.C.P. EDIN., L.R.C.S. IREL.

ONE night at the end of last February I was called by a police officer to attend a man who was literally hooked on to an iron gate opening off a street in the neighbourhood of New Cross. The spike of the iron railing had entered beneath the chin, penetrated the floor of the mouth, issued through the mouth, and was jammed against the right cheek, the point reaching as far as the internal canthus of the eye. The man was making violent but unavailing efforts to disengage himself, and must have been in that position for a long time, as he seemed to be exhausted from his prolonged struggling. My first idea was to raise his head off the railings, but this was not easy, as the shoulders of the pike-shaped rail were locked in by the narrow horizontal rami of the lower jawbone, so that the head was held fast. I then turned the head in a line with the gate, aided by several constables who lifted the body from the ground. In this position the shoulders of the end of the rail were in the long axis of the "maxillary outlet," so that the man was easily released from his distressing position and was conveyed on an ambulance to the hospital. There was only very slight hæmorrhage; he was intoxicated and unable to give any account of himself. How he got on the gate, whether by deliberately thrusting himself on the spike or whether he was placed there by others, I am unable to say. I am indebted to Mr. M. K. Tebay, house surgeon of the Miller Hospital at Greenwich, for further particulars of the case. The man is now practically well; the wound in the floor of his mouth is granulating very favourably, and he will soon leave the hospital. I ought to add that all the front teeth in the upper jaw were broken off.

New Cross-road, S.E.

NOTES ON A CASE OF WOUND OF THE PALMAR ARCH NECESSITATING LIGATURE OF THE BRACHIAL ARTERY.

By S. J. ROSS, M.B., CH.B. VICT.

IN May, 1896, I was called to see a boy who had run a spike into the palm of his right hand. I saw him almost immediately after the accident. He had lost a considerable amount of blood, and the hæmorrhage was still very free from the wound. A pad of cyanide gauze over the palmar wound was applied. The elbow joint was flexed over a roller bandage,

and the patient was put to bed. Two days afterwards the hæmorrhage still persisted slightly, but gave no cause for alarm. On the third day, however, I was called to see the patient, as the hæmorrhage had recurred as profusely as before. He was becoming blanched, the pulse was frequent, and he was getting restless—indications for more active interference. I decided to ligature the brachial artery at the insertion of the coraco-brachialis muscle. This I did. The limb was then wrapped up in cotton-wool, and in three weeks both the palmar and brachial wounds were soundly healed.

My reason for deciding to ligature the brachial artery instead of the radial and ulnar was that the boy was practically in a state of collapse, and consequently I considered that if I ligatured the two vessels separately there would probably be a recurrence of hæmorrhage, due to the free anastomosis between the branches of these vessels; so that I thought it better to place the patient beyond even the possibility of such recurrence. I have carefully watched the subsequent history of the case, and know that the boy is in perfect health and has not been in the least inconvenienced by the operation.

Lancaster.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

A CASE OF PNEUMO-BACILLARY CONJUNCTIVITIS.

(Under the care of Dr. BRAILEY.)

IN the following case of conjunctivitis the pneumo-bacillus of Friedländer, which was present in the conjunctival sac, appeared to have a causal, and not merely an accidental, relationship to the lesion. For the notes of this case we are indebted to Dr. J. Eyre.

The patient, a feeble old man, aged sixty years, presented himself at the out-patient department complaining of pain, constant watering of the eyes, and failing sight, the symptoms dating from six months previously, when the eyes were very "blood-shot" and a purulent discharge was present. On examination there was found to be considerable injection of the vessels of the palpebral conjunctiva and to a less extent of the bulbar conjunctiva; a certain amount of photophobia and very obvious lacrymation were also noted—in fact, all the appearances were those of a simple chronic conjunctivitis. When, however, the caruncle was examined its surface was found to be hidden by a thick, viscid, shining, white film, which could easily be removed piecemeal, having no very intimate attachment. The actual surface of the caruncle, when exposed, appeared to be somewhat hyperæmic, but not raw or bleeding; the follicles of this body were also found to contain a similar material, which could be expressed by squeezing the caruncle between the points of a pair of forceps. The affection was bilateral. Vision in each eye = $\frac{6}{9}$, with + 0·5 D. sph. = $\frac{6}{6}$, and with + 5 D. sph. the patient read J. 1 at a distance of eleven inches. Treatment appeared to have no effect upon this case, and although the patient was under observation for about two months the conjunctivitis showed no definite improvement. The "pseudo-membrane" invariably re-formed within twenty-four hours of removal. Lotions of boric acid were useless; those of perchloride of mercury, 1 in 5000, were not followed by any obvious benefit. The film was removed from the caruncle, and the surface of this latter painted with 1 per cent., and subsequently with 2 per cent., solutions of the perchloride of mercury, with the result that the formation of the viscid layer was delayed for forty-eight hours, whilst the effect of 1, 2, and 3 per cent. solutions of nitrate of silver was equally transient.

Remarks by Dr. EYRE.—As regards the bacteriological aspect of the case the microscopical examination of the "pseudo-membrane" removed from the caruncle showed that it was simply a mass of degenerated epithelial cells, desquamated from the surface of the conjunctiva, with a few granular leucocytes. In, upon, and between the squamous cells were seen large numbers of short, oval bacilli, either single or arranged in pairs as diplo-bacilli (in this latter case the individual bacilli were often so short that the organism simulated a diplococcus), which did not retain their stain when treated by Gram's method. No capsule could be demonstrated. Cover-slip smear preparations made direct from the conjunctival secretion showed a precisely similar bacillus in enormous numbers; no other micro-organisms could be detected. Cultivations were made from the secretion contained in the conjunctival sac and also from the material removed from the surface of the caruncle, on blood serum and on agar-agar. After twenty-four hours' incubation at 37·5° C. all the tubes were found to contain a growth which consisted of a pure culture of a non-motile, pleomorphic bacillus not staining by Gram's method. Sub-cultivations on various media demonstrated the following biological characters:—1. On agar (streak) at twenty-four hours a shining, opaque white, viscid layer formed, exhibiting a pearly lustre; the growth tended to spread from the needle track outwards to the edges of the nutrient surface. 2. On inspissated blood serum the growth was as on agar, but more luxuriant and rapid. 3. On gelatin (stab) a typical "nail" growth was produced; the head elevated and spherical, soon became yellowish and porcelain-like in appearance, whilst the needle track in the depths of the gelatin was occupied by numerous small, spherical, discrete yellowish colonies. No liquefaction of the medium took place. 4. On gelatin (shake) an abundant evolution of gas took place. 5. In litmus milk a good growth took place, accompanied by the production of an acid reaction; coagulation of the casein was accomplished in from three to five days. 6. On potato a thick, yellowish-brown, viscid layer rapidly made its appearance, the colour deepening with age. Numerous bubbles of gas were seen to be entangled in the growth. From a consideration of these properties it seemed most probable that we were dealing with the pneumo-bacillus of Friedländer, and in order to confirm this opinion a small quantity of a twenty-four hours old agar culture was removed from the tube with a platinum spatula and introduced into the subcutaneous tissue at the root of the tail of a mouse weighing 20 grammes. Death ensued in forty-eight hours, and at the post-mortem examination the heart-blood was found to be crowded with the capsulated Friedländer's bacillus. On several subsequent occasions cultures were made from the conjunctival secretion and from the material on the caruncle, with precisely similar results. Some of the actual material removed from the caruncle was also inoculated into the subcutaneous tissues of another mouse. Death followed in three days, and the Friedländer's bacillus was recovered from the heart-blood.

I am indebted to Dr. Brailey for permission to publish the notes of the case.

LEICESTER GENERAL INFIRMARY.

A CASE OF PERFORATED GASTRIC ULCER; OPERATION; RECOVERY.

(Under the care of Dr. J. ST. THOMAS CLARKE.)

THE following case, though simple throughout, gives additional evidence of the extreme value of early accurate diagnosis and promptitude in action on the part of the general practitioner, supplemented by abdominal exploration almost immediately applied after admission of the patient into hospital. In the last edition of the work on "Abdominal Surgery" by Mr. Greig Smith[1] it is stated that altogether about 100 operations have been performed for perforating gastric ulcer, the death-rate, as near as can be judged, being for the acute cases about 70 per cent., and for the chronic cases about 55 per cent. This is high, but it is better than would be got by leaving the cases to nature, where the mortality is over 90 per cent. With its present mortality operation is already fully justified—indeed, operation immediately on the diagnosis of perforation is nothing less than imperative. The extensive

[1] Vol. i., p. 570.

diffusion of the gastric contents only six hours after perforation is a noteworthy point in this case.

A domestic servant, aged nineteen years, was seized with severe epigastric pain and sickness two hours after her mid-day dinner of beef, potatoes, and rice pudding—namely, about 4 P.M. She had had some uneasiness about the stomach for two or three days previously, and two years ago she had suffered from hæmatemesis and since then had often felt pain after her food with occasional sickness. Dr. Davies of Aylestone Park, Leicester, on being called to see her at once suspected perforation of the stomach and promptly telephoned to the hospital to ensure immediate attention on arrival. On admission (Nov 11th, 1896) at 8.30 P.M. the patient was collapsed, though not markedly so, but her symptoms were clearly abdominal, and her aspect, attitude, and pallor made it evident at once that abdominal exploration was urgently called for. The operation was commenced at 10 P.M. by a five-inch median incision from close to the xiphoid cartilage to near the umbilicus. The left rectus was not divided. The falciform ligament of the liver being in the way somewhat delayed the due opening of the peritoneum, but on getting through this membrane odourless gas and turbid fluid escaped, and bits of potato and rice were seen scattered about. There were no adhesions. On drawing down the stomach a perforated ulcer the size of a threepenny piece was found on the anterior surface near the cardiac end, through which some more rice and potato were found escaping. The edges of the ulcer were indurated and the base around for some distance was thickened. Considerable traction downwards was necessary to bring the ulcer within due reach. The fluid and bits of food were as far as possible at once removed, sponges were adjusted around, and the stomach was washed out with two syringefuls of fairly hot water. The edges were too deep to admit of being trimmed, so the opening was now closed by two rows of fine silk sutures by Lembert's method and fixed well beyond the ulcer both above and below. The abdominal opening was then covered temporarily with hot sponges and a second median incision was made a little above the pubes so as to explore Douglas's pouch. On passing a good-sized sponge deep into this it was found on withdrawal to be soaked with the same turbid fluid as noticed previously. The abdominal cavity was now freely irrigated with hot water at a temperature of 105° F., several pints being passed through it, and the various recesses especially were dealt with by means of the glass tube passed between the coils, above and under the liver, and in the different regions till all fluid returned clear. The surplus was then sponged away. A large drainage-tube was then inserted into Douglas's pouch and the lower wound was closed and a similar piece of tube was inserted through the upper opening and reaching to the site of the ulcer. The operation lasted one and three-quarter hours and was borne well by the patient. Three hours after the operation a hypodermic injection of morphia was given to relieve pain. Sickness occurred once in the night. Nutrient enemata were administered regularly. On the second day improvement was noticed. Thirst was relieved by a hot-water enema each day and the drainage-tubes were removed and replaced by plugs of iodoform gauze. On the sixth day a small discharge of pus occurred from the epigastric wound, which otherwise was doing well. Rectal feeding was continued till the eighth day, when the patient started with small sips of hot water and with half-teaspoonful doses of Brand's essence. The wounds gradually closed and convalescence was uninterrupted, and the patient was discharged well on Jan. 13th, 1897, weighing seven pounds more than on admission.

Remarks by Dr. CLARKE.—There seems to be no doubt that in this case, apart from early operation and efficient suturing, the free irrigation of the abdominal cavity must have been an essential factor in the success. Mere sponging alone, as practised by some, could not be relied upon to clear away all the traces of the fluid which had escaped from the stomach and which must have bathed more or less before the operation the whole peritoneum. Further, the second opening must have been a great contributory also to the well doing, as Douglas's pouch contained a quantity of the gastric fluid, and to have been content with irrigation and sponging out apart from a second opening would have left a quantity of this fluid unreached. Another point is, whether good is done by syringing out the stomach. If time admit this process would help to clear it and to dilute any contents likely to irritate a newly sewn wound. The heat of the irrigating fluid is apparently very beneficial if done at a temperature over 100°, and probably Greig Smith's suggestion of employing irrigation during the whole operation will often be of advantage to the patient, though not adopted in this case. I have to thank very greatly Mr. M. B. Foster, the house surgeon, for his assiduous attention throughout the case and for putting together the details for publication.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

"Sable Intestinal."—Gummatous Enlargement of the Kidney.—Minute Anatomy of Intussusception.—Giant-celled Tumours of the Skin.—Occlusion of the Duodenum.

A MEETING of this society was held on March 16th, Mr. A. E. BARKER, Vice-President, being in the chair.

Mr. S. G. SHATTOCK made a communication on "Sable Intestinal." He described the "sand" as consisting almost solely of spheroidal aggregations of vegetable sclerenchymatous cells, about half a millimetre in diameter, in all ways like those so well known to occur in the fruit of the pear. They were quite free from adventitious crystalline deposits. A closely similar case brought before the society in 1892 by Professor Delépine appeared to have been the first, and up to the present time the last, recorded in this country. Professor Delépine's case more closely corresponded with the original description of Laboulbène (1873) in that the cell islets were admixed with crystalline depositions of phosphate, oxalate, and carbonate of calcium. The patient from whom the specimen was obtained was a woman aged forty-five years, under the care of Mr. A. E. Hind of Jersey, who had suffered for about seven years with left hydro-nephrosis. She visited Vichy a few years ago, where the sandlike material passed by the bowel was thought to come from the kidney by some fistulous communication. After an aperient she frequently passed as much as two ounces of the "sand." The patient was fond of pears and these were the only articles in her dietary capable of furnishing it. The accumulation of orange pips and fruit stones, &c., above intestinal strictures was well known, but an explanation of the retention of such minute residua was not easy. In the case recorded the pressure of the hydro-nephrotic kidney may have led to obstruction sufficient to retard the progress of the indigestible materials. The term "sable intestinal" should not, Mr. Shattock remarked, be applied to biliary gravel, which is at times passed in considerable quantity by the intestine.—Mr. BARKER asked if the discharge of the vegetable débris was continuous and if the grains floated in water.—Mr. SHATTOCK, in reply, said that the discharge was intermittent, but that its appearance could always be brought about by giving an aperient. The grains sank in water.

Mr. A. A. BOWLBY exhibited a specimen of Gummatous Affection of the Kidney causing a large renal tumour. The patient was a stout, healthy woman, forty years of age, who had suffered from syphilis twenty-one years previously, but had had no syphilitic manifestations for nineteen years. She complained of a tender swelling in the right lumbar region, which steadily increased in size. There were no other symptoms, and except for an occasional trace of albumin the urine was normal in amount and composition. The swelling attained such a size that it simulated a large new growth of the kidney, and was removed by lumbar nephrectomy. It weighed over a pound, and was found to be a kidney so completely infiltrated with gummatous growth that it was almost impossible to find any trace of the renal tubules, and as its removal was not followed by any diminution of the quantity of urine it is almost certain that it was not functionally active. Two years after the operation the patient was in excellent health, and there was every reason to believe that the other kidney was sound. The condition did not appear to have been hitherto described.—Mr. BERTRAM ABRAHAMS referred to the case of a child, six months old, the subject of congenital syphilis, in which there were gummata causing nodular protrusions.

Mr. D'ARCY POWER brought forward a series of lantern slides to illustrate some points in the Minute Anatomy of

Intussusception, saying that he did so partly to obtain the benefit of criticism and partly because some of the specimens from which the sections were taken had already been shown at previous meetings of the society. After drawing attention to the fact that adult intussusceptions were often associated with polypi, Mr. Power showed some sections taken from a case of intussusception exhibited by Mr. Lockwood in 1892. The specimen was obtained from a woman who died shortly after an abdominal section and enterectomy for the relief of intussusception of five days' duration. Microscopical examination showed that the intestine had undergone very chronic changes, for the villi had become converted into mere tags of connective tissue, whilst all the coats of the intestine had been chronically inflamed. Other sections were taken from a specimen brought before the society by Dr. Peacock in 1864. The case from which the specimen was obtained occurred in the practice of Mr. Bacon of Hackney, to whom Mr. Power expressed his gratitude for additional information. The original specimen consisted of a piece of intestine measuring forty inches in length, which had been passed by a woman aged thirty-two years. It was voided without any blood, but enveloped in fæcal matter on the eighteenth day after the onset of severe intestinal obstruction. The patient died unmarried on July 30th, 1889, from some lung trouble, but she never again had any acute intestinal symptoms, though she was subject to constipation. Microscopic examination showed that all the coats of the intestine had undergone sclerosis. The line of the mucous membrane was distinct, though none of the details of its structure could be seen; but the sub-mucous coat was indistinguishable from the muscular, and the muscular layers from each other and from the serous layer. The whole thickness of the section consisted of dense fibroid tissue, like that found in an old scar. Mr. Power then demonstrated, by means of sections taken from other cases in which pieces of intussusceptod bowel had been passed and the patient had recovered, that the intestine might undergo a process of tryptic digestion before it was extruded. He then showed sections from a case of double intussusception which he had exhibited before the society in 1886. One of the intussusceptions was of the ordinary ileo-colic type and presented the changes usually found in acute invagination; the other was retrograde and colo-colic. It had been formed much later than the ileo-colic invagination, and Mr. Power thought that it had been produced when the child was so exhausted that the wall of its alimentary canal hardly responded to the effects of pressure. The slight congestion of the bloodvessels in the sub-mucous tissue and the great enlargement of the vessels in the serous coat and in the mesentery showed that the patient was not absolutely moribund when the second intussusception was formed.—Mr. SHATTOCK suggested that some of the spaces shown in the microscopic specimens might be dilated lymphatics.—Mr. BARKER asked if in any of the severe cases there was total destruction of the mucous membrane. He thought that there was great variation in the amount of change in the gut in different cases, quite apart from the time that the intussusception had existed, just as was the case in strangulated hernia.—Dr. COUPLAND asked if Mr. Power could say how long the intussusception had been down before the tryptic digestion began.—Mr. TARGETT asked whether the detachment of an intussusception was due to sloughing or to digestion. Could this digestion be the cause of the passage of tubular casts of the intestinal mucosa?—Mr. BOWLBY remarked that the cases of recovery quoted after sloughing of the intussusception had been in adults. He thought that this was a much rarer accident than the text-book description would indicate, and that in children it was scarcely ever recovered from.—Mr. SPENCER asked whether in Mr. Power's experiments the digestion had been purely tryptic in an aseptic medium, or whether organisms had been present as well.—Mr. POWER, in reply, said that his specimens had not been taken from very severe cases. Tryptic digestion had been performed in the presence of organisms, just as in the normal intestine.

Mr. TARGETT read notes of four cases of Small Tumours removed from the Integuments. They were well-defined tumours situated beneath the skin, and in two instances definitely above the deep fascia. Microscopically they were characterised by possessing an abundance of polynuclear giant cells, the nuclei being crowded into the centre of the cell, and not arranged in a peripheral ring as in tuberculous giant cells. The questions of malignancy and their probable origin were discussed. In one of the cases recurrence had taken place; there was no history of syphilis to be obtained in any of the cases, and the microscopic appearances did not suggest it.—Dr. GALLOWAY said that he had recently seen a very similar tumour, which was in the precubital space, and was one of several subcutaneous tumours. It was removed for diagnostic purposes, and was found to contain many giant cells, but no tubercle bacilli. After a time an enlargement of one testicle occurred and iodide of potassium was administered. This not only led to the disappearance of the testicular enlargement, but also to that of the subcutaneous tumours, which he therefore thought must have been syphilitic. There was a history of syphilis in the case.

Dr. F. H. CHAMPNEYS and Mr. D'ARCY POWER exhibited a specimen showing Occlusion of the Duodenum by a complete Transverse Septum. It was taken from an infant who lived for five days and who had vomiting and jaundice from birth. The lumen of the intestine was found to be completely interrupted by a septum stretching across the second part of the duodenum, just before the entrance of the common bile duct. A microscopic examination by Mr. Strangeways Pigg showed that it was a direct continuation of the mucous, sub-mucous, and circular coats of the intestine. It was suggested that it had been the result of some error in the developmental processes connected with the formation of the liver.—Mr. SHATTOCK agreed with this view of the pathology of the condition, and observed that a similar stenosis of the œsophagus had been known to occur at the point at which the outgrowth of the lung had originally occurred.—Mr. W. G. SPENCER objected that there was no abnormality in the liver or spleen in this case. He suggested that the abnormality might be due to some deformity taking place at the upper part of the neck of the umbilical vesicle.—Mr. RAYMOND JOHNSON thought that the cases were on a par with stenosis of the intestine at the level of Meckel's diverticulum, with stenosis of the aorta at the point of entrance of the ductus arteriosus, and possibly with imperforate anus.

OPHTHALMOLOGICAL SOCIETY.

Discussion on Retro-ocular Neuritis.

AN ordinary meeting of this society was held on March 11th, Mr. E. NETTLESHIP, President, being in the chair.

Mr. MARCUS GUNN, in opening the discussion on Retro-ocular Neuritis, referred the disorder to a group of diseases which, though not recognisable by objective features, had distinct clinical manifestations, and on account of its subjective aspect was liable to be confounded with hysterical amblyopia, particularly when one eye only was affected. An important distinction between the two conditions was furnished by the reaction of the pupil, which was active in the hysterical condition, but sluggish or absent in the nerve affection, there being sometimes failure in maintaining the contraction. Occasionally the papilla was affected and in some cases both eyes were involved, but the changes in the disc were never gross. In papillitis the fundus changes preceded the loss of vision, but in retro-ocular neuritis vision failed early and in the centre of the field, the disc changes occurring later. Vision improved with subsidence of the neuritis, which might be followed by some pallor of the outer half of the disc proportionate to the intensity of the inflammation. It appeared that the swelling in papillitis did not interfere immediately with the transmission of nerve impulses, whereas in deeper seated neuritis it did so immediately, owing to the pressure being exerted centripetally upon the nerve fibres. This he attributed to the resistance of the nerve sheath, pointing out that the effect was most marked when the portion of nerve affected lay within the optic foramen, which was quite unyielding. One of the most prominent features of the disease was the presence of a central scotoma, first for colour (green-red) and afterwards for light, showing that the macular fibres were earliest affected. This might be due to the following facts: 1. The macular fibres, though peripheral at the ocular end of the optic nerve, attain a central position in the optic foramen. 2. The macular fibres, being functionally the most active, are earliest affected by pressure. 3. The principal lymph current traverses the centre of the nerve. 4. The macular fibres

occupy a relatively large area in the optic nerve. With regard to the symptoms of retro-ocular neuritis, in one case there was subjective sensation of colour of a violet or reddish pink tint, with slight peripheral contraction of the field and a diminution there of perception for green, which assumed a bronze appearance. The movement of the eyeball was painful in one or other direction corresponding with the portion of nerve affected. The degree of amblyopia varied greatly. Acuity of vision was diminished in a bright light or after prolonged use, general fatigue, or exhaustion from want of food. In some cases objects appeared as if seen through a moving haze. These phenomena might be explained by the breaking up of the nerve-sheath, leaving the axis cylinders incompletely insulated, or by the alternating activity of exhausted fibres. In support of this last suggestion it has been found that the colours red and blue are distasteful to the subjects of retro-ocular neuritis. The liability to injury appears to be more marked at the periphery and extreme centre of the nerve. The causation of the neuritis may be traced locally to the spread of the change to the nerve from neighbouring orbital cellulitis, due to erysipelas, cold, or septicæmia; or to periostitis extending to the optic foramen from the adjacent sphenoidal sinuses, in which case both nerves are affected; or the neuritis may be a local manifestation of a general disease, such as syphilis, gout, or rheumatism, the latter having a tendency to recurrence; and, finally, the optic tracts and nerves are liable to suffer as part of the central nervous system, as in insular sclerosis.

Dr. BUZZARD spoke on the medical group of cases exhibiting the features of retro-ocular neuritis. In insular sclerosis disorders of vision were frequently associated with atrophy of the optic disc, a condition referable to neuritis of the retro-ocular portion of the nerve; 50 per cent. of cases of this disease presented pallor of one or both discs, or in place of this a red-grey injection and amblyopia lasting for days or months. Post mortem there were found islets of gelatinous tissue of a warm grey colour, having a diameter of an inch or more in the brain, and varying greatly in number. Microscopically, they were found to exhibit naked axis cylinders, increase of the fibrous elements and a primary vascular change, but a certain proportion of the fibres were degenerated independently of the other changes. Dr. Buzzard attributed these appearances to interstitial inflammation occurring in local patches capable of resolution, but causing temporary paralysis, and he assumed the same condition to be present in the optic nerve. Secondary degeneration did not take place, the lesions were localised, and the pallor of the disc was due to interference with blood-supply, not to atrophy. The local diagnostic features were the pallor or greyish-white colour of the disc, chiefly in the temporal half, the edges being sharp, the physiological cup deep, and the lamina cribrosa distinct, these changes being bilateral and associated with preceding or immediate impairment of vision; whereas in the intra-ocular form of optic neuritis the changes were much more obvious and attended at first with little or no alteration in vision and no central scotoma, the loss of vision being slowly progressive. In the retro-ocular form the central scotoma was general and the peripheral amblyopia a characteristic feature, but both were transitory, and there was no progressive deterioration of vision. Concentric contraction of the visual fields sometimes occurred in diphtheria, and the speaker referred to an instance in a man, aged fifty-eight years, with paresis of arms, legs, and palate after sore throat, to whom the floor appeared concave at the point of sight. There was no scotoma, the fields of vision were small, and the left disc was pallid. The fields had since enlarged.

Dr. GOWERS drew attention to the modern established fact that an axis cylinder contained as many fibrils as there were fibres in a nerve, and the important bearing this had on the comprehension of pathological changes. In connexion with the rheumatic origin of neuritis he quoted an instance of a young man who, after a bath, suffered from paralysis of the ocular nerves with proptosis and tenderness of the left eye associated with convulsions, and followed by a similar condition on the right side. He attributed the symptoms to acute cellulitis of the orbit extending to the membranes of the brain. Referring to ten cases of insular sclerosis in which the optic nerve was affected there were none, he thought, in which the nature of the changes suggested an islet in the optic nerve. In many of the cases the state of the vision and appearance of the disc were identical with those occurring in tabes dorsalis, apparently a primary affection of the nerve fibres. The cases referred to by Dr. Buzzard he thought were of a similar nature. Retro-ocular neuritis was frequently a result of blood poison, especially gout. The symptoms might simulate those of an intracranial tumour affecting the chiasma.

Dr. BERRY thought the disease was a very obscure one, and that the diagnosis was made too frequently with little precision. The condition was distinct from papillitis of cerebro-pathological origin. Pallor and atrophy of the disc he considered were doubtful signs of retro-ocular neuritis. Symptoms very similar to those attributed to this disease occurred in connexion with irritation in the teeth and also in migraine where nothing could be found in the fundus. Toxin poisoning, he thought, was unlikely to produce changes in one eye only. He classified the forms of defective vision due to retro-ocular causes as (1) those connected with cerebral tumour: (2) those due to chill and for the most part unilateral; and (3) toxic amblyopia, which was bilateral and, he thought, not neuritis. Many cases diagnosed as hysteria were more serious cases of nerve or cerebral disease which manifested itself later.

Dr. HILL GRIFFITH said that, excluding tobacco amblyopia, he had met with twenty-seven of the cases under discussion, eight of which had been bilateral. The cases occurred between the ages of fourteen and fifty-seven years. There was a central scotoma in nearly all, and no contraction of the field of vision. A direct light reflex was present, though in three cases there was no perception of light. The vision and pupil reflex was ultimately restored in all the cases. Pain occurred early only, and was at its worst about the second day. The disc at this period was pale or unaltered. All the cases were treated with potassium iodide, salicylate of soda, and blisters, and recovery took place in all, though in some vision was not as good as before the attack. Dr. Griffith agreed with the suggestion of Thorburn, that the symptoms were due to rheumatic axial neuritis.

Mr. RICHARDSON CROSS, referring to the literature of the subject, said that central scotoma and slight pallor of the optic disc appeared to be the most widely observed features. Out of fifty-seven cases of retro-ocular neuritis he had selected from 154 instances of optic nerve disease the disorder was attributed to toxic causes in two-thirds, which was more common than in his own observations. Uhtoff in 400 alcoholic subjects observed pallor of the disc in seventy; half he attributed to alcohol and one-sixth to tobacco, the choice of these among the remaining third being uncertain. He considered alcohol was an important factor in the causation of the condition, though it was asserted by some that the occurrence of tobacco amblyopia was prevented by its use. In his own five cases there was slight papillitis in one eye with a central scotoma, but no affection of the periphery and no other ocular changes.

Mr. LITTLE, speaking of these cases apart from toxic causes, dwelt upon the occurrence of pain, central scotoma, and diminution of visual acuity as characteristic of the affection in the absence of definite fundus change. Though the scotoma was large and in one case there was absolute blindness, all the cases recovered rapidly.

The discussion was adjourned till Wednesday, March 24th.

EPIDEMIOLOGICAL SOCIETY.

Review of the Statement of the Dissentient Members of the Royal Commission on Vaccination

A MEETING of this society was held on Feb. 19th, Mr. SHIRLEY F. MURPHY being in the chair.

Dr. J. C. MCVAIL read portions of a paper (printed copies of a proof of which were supplied to all present) reviewing the Statement of the Dissentient Members of the Royal Commission on Vaccination. He inferred from their use of such expressions as "*more* effective, *more* practicable, and *less* objectionable modes of protecting the community from small-pox than by vaccination," "approaching the subject *too exclusively* from the standpoint of vaccination," and "according *too little* importance to other measures," that when they did not by their silence imply agreement they differed from the conclusions of their colleagues more in degree than in fact. Their treatment of the early history of small pox, their estimates of the extent and influence of the practice of inoculation, and their arbitrary choice of authorities, though not matters of much practical importance, were in the

highest degree unsatisfactory from the bias they displayed. Mead, for example, was not, as they suggested, prepared to apply to what he expressly described as "the more common contagion of small-pox" the strict quarantine and isolation that he advised as precautions against future re-introduction of the plague, the two diseases being looked on in his days somewhat as cholera and measles are now; and (to say nothing of their protests against compulsion as applied to vaccination) it was unfair to italicise in a quotation from Haygarth his reference to the benefits "which might reasonably be expected from the united, systematic, and concerted regulations of the whole island, aided and strengthened by legal premiums and punishments," without a hint of his belief that the infection could not be conveyed by clothing or otherwise than by actual contact, on which the feasibility of his scheme depended. It was even more unfair to represent Sir James Simpson as a supporter of isolation as a substitute for vaccination on the strength of selected passages from an essay which contained a glowing eulogy of Jenner and vaccination. They seized every opportunity of emphasising the influence of sanitary improvements in reducing the mortality from "fevers," though the figures they quoted from Sir John Simon showed that between two periods 1746–55 and 1846–55 selected by them "fevers" had declined in the proportion of 100 to 71 only, but small-pox of 100 to 17, and that in recent years the reduction had been confined to typhus fever and typhoid fever, measles having been unaffected, and there was no falling off in scarlet fever until 1880. Their speculations as to the numbers of susceptible persons and the influence of inoculation and vaccination at different periods were based largely on conjecture and assumption. Their account of the labours of Jenner, of his controversy with Woodville and Pearson, of their conversion to his views as to the non-eruptive nature of cow-pox and of their employment of the "variolous test," was misleading. They seemed to desire to charge Jenner with deliberate fraud, as using for his tests clear variolous lymph instead of pus in order to court failure; when, in fact, with the instinct of a bacteriologist, he did so that he might have the virus free from extraneous contamination. When it suited their purpose they described as vaccinations operations which they had previously declared to be almost certainly variolations, and endeavoured to extricate themselves from the dilemma by saying that they employed the word vaccination in a colloquial sense. They took the statistics of the Highgate Hospital—which for many years had been a small-pox hospital in name only, admitting none but paying patients, and refusing all under seven years of age—as fairly representing the extent of vaccination and the prevalence and age incidence of small-pox in London generally, wholly ignoring the evidence before them derived from the free hospitals of the Asylums Board at Homerton and Fulham, where of 2540 children admitted under ten years of age 47 per cent. were unvaccinated, though the proportion of unvaccinated children in London must have been incomparably less. When they came to the question of the recent epidemics at Sheffield, Leicester, Dewsbury, Warrington, and Gloucester there was the same effort to explain away positive facts and figures by arbitrary conjectures, and they refused to recognise differences in the type and severity of the disease, although they had argued that when vaccination was unknown the fatality varied from 2·5 to 33 per cent. They compared the death-rate of 9·9 per cent. among the vaccinated at Gloucester with that of 12 per cent. among the unvaccinated at Leicester, ignoring the fact that at the former town the disease was of the severest and at the latter of the mildest type, the fatality among the vaccinated and unvaccinated respectively having maintained the same relative proportions—viz., at Leicester, 1 and 12; in London, 2·2 and 24·2; at Dewsbury, 2·6 and 25·1; at Sheffield, 4·8 and 49·6; at Warrington, 6·4 and 35·3; and at Gloucester, 9·9 and 40·9. In the whole of the six towns the fatality among the vaccinated under ten years was 2·7 per cent. and of those above about 5 per cent. Among the unvaccinated under ten it was 36 per cent. and over ten 34·3. As to severity of type of small-pox, they affected to discredit Dr. Barry's classification of the cases into varioloid, and discrete, coherent, and confluent variola, which gave attack percentages among the vaccinated of 35·5, 50·0, 13·0, and 1·5, and among the unvaccinated of 0·0, 17·9, 62·5, and 19·6, on the ground that no two observers would exactly agree; but ignored the simple grouping by different men into milder and severer, which alike at Sheffield, Dewsbury, Leicester, and Warrington showed an almost exactly inverse proportion among vaccinated and unvaccinated. They refused, too, to recognise degrees of efficiency in vaccination, and took susceptibility to re-vaccination as indicative of the same to small-pox infection, although they knew that inoculation could be repeated. They affected to ascribe much of the great mortality from small-pox, especially among children, in the last century to the practice of inoculation, ignoring the Geneva statistics of a still earlier period, which showed that of 25,349 deaths, 6792 occurred in the first, 5416 in the second, 4116 in the third, 2826 in the fourth, and 1928 in the fifth, or 21,078 = over 83 per cent. in the first five years of life, and manipulated Dr. Ogle's statistics to suit their own ends, so that, e.g., in the *Contemporary Review* Mr. Picton spoke of the difference between 46·7 per cent. and 30·3 per cent. as 16·4 per cent. when vaccination was involved, but in the Statement of Dissent he held that the difference between 6·4 per cent. and 3·4 per cent. was 46·9 per cent. (by taking the 6·4 as the centum) instead of 3 per cent. when the reduction could, they fancied, be ascribed to "sanitation." The influence of sanitation was, they maintained, most evident in the early years of childhood. Well, said Dr. McVail, what could we learn from the case of Scotland, where vaccination was since 1863 compulsory at the age of six months? In the nine years preceding the passing of the Act 139 of every 1000 deaths from small-pox occurred in the first six months of life, and in the twenty-four years following 138. In the next six months the deaths in the former period were 153 and in the latter 47 in the 1000. The saving of 106 was clearly due to vaccination, and that of 1 per 1000 in the first half-year of life might be to sanitation. In Germany, again, where vaccination was not required until some time in the second year, 410 deaths per 1000 at all ages occurred in the first two years of infancy, and yet opponents of vaccination alleged that it was sanitation, not vaccination, that had reduced German small-pox. At Sheffield, which, according to the dissentients, was an insanitary though fairly vaccinated town, 25·6 per cent. of the deaths from small-pox were those of children under ten years; while at Leicester, unvaccinnated, but relying on its boasted sanitation, the children constituted 71·4 per cent. of the whole mortality. The like ratio between the practice or neglect of vaccination of late and the small-pox incidence on the child population might be traced in every town for which the data were available; and yet they could not, while justly insisting on the susceptibility of childhood to the influence of surroundings for good or ill, recognise another and dominating factor in the mortality from small-pox. As regards the relation between variola and vaccinia the dissentients were in hopeless confusion: they failed to distinguish between the attenuated variolous lymph of Walker and Thiele and the variola-vaccine of Ceely, Voigt, Haccius, and others who had completely refuted the doctrine of the Alfort school, and they invoked Creighton and Crookshank alike, regardless of the fact that these gentlemen were essentially opposed to each other in their views, Dr. Creighton denying the venereal origin of vaccinal syphilis and substituting for Dr. Crookshank's bacteria a transcendental hypothesis of "memory" in diseases. On the vexed question of diseases communicated by or consequent on vaccination the Commissioners, as the result of inquiries conducted by their request into every alleged case during the past seven years, came to the conclusion that the dangers, though real as regards erysipelas and wound infection, had been greatly exaggerated and were practically insignificant. Mr. Picton and Dr. Collins thought otherwise, though abandoning the position of Mr. Hopwood, who ascribed to vaccination diseases that seemed to be on the increase, revising his list from time to time on no other ground than that some which had been supposed to be increasing were really found to be decreasing. The dissentient Commissioners relied largely on syphilis and erysipelas, but here again Dr. McVail confronted them with statistics from Scotland and the town of Leicester. In the nine years preceding the enforcement of vaccination in Scotland children in the second half-year of life contributed 109 out of every 1000 deaths from syphilis, and in the subsequent periods 1864–75 and 1876–87 the proportions were 118 and 109, or about the same; whereas in the first or unvaccinated half-year of life the number had risen from 575 to 612 and 647, so that unvaccinated infants contributed two-thirds of the total deaths from syphilis at all ages. In Leicester the mortality from syphilis, of course mainly infantile, had in the past

twenty years increased by 69 3 per cent., but in England and Wales generally by only 24 7 per cent., and from erysipelas by 41·5 per cent. in Leicester, as against a decrease of 16·7 per cent. elsewhere. The vagueness of the term "sanitation," under which they appeared to include progress in the comforts and decencies of life as well as all preventive measures—with the exception of the greatest of all, vaccination—enabled them to refer any improvement at any period back to the Middle Ages to this panacea, and by associating small-pox with typhus fever, "gaol fevers," and typhoid fever the strongly marked effects of vaccination on the small-pox mortality were merged in the more gradual improvement in the public health properly ascribed to the introduction of better habits and more wholesome surroundings; though why they should fix on the year 1800 as the era of "greater sanitary activity"—a period marked by no appreciable change in the law or the habits of the people, except the epoch-making introduction of vaccination—was by no means obvious. They quoted the belief or hope expressed by Sir E. Chadwick that improved sanitation would tend to the extinction of all preventable diseases, including small-pox, forgetting that, however deserving of our gratitude and respect he might be as a pioneer in sanitary reform, he was not a physician and had no right to pronounce on questions of a strictly medical character. Their treatment of Hirsch was peculiar, for they professed to agree with him that small-pox as well as typhus fever "took up its abode most readily in those places where the noxious influences due to neglected hygiene made themselves most felt," while making no reference to his declaration that "the achievement of Jenner was at once a turning point in the history of small-pox and a new era in the physical welfare of mankind," ..... and that "it could be only folly or stupidity that would seek nowadays to minimise or question the immortal merits of Jenner." Social position as well as sanitary environment had, they stated, a potent influence on the prevalence and fatality of small-pox; but that was mainly because the upper classes availed themselves of the protection afforded by vaccination, for, as Simon reminded us, several of the royal families of Europe, as the Stuarts, the House of Orange, and those of Austria and Germany, France and Russia, in the seventeenth and eighteenth centuries had many victims to this disease. The observation of Dr. Cross, that "the epidemic at Norwich in 1819 was almost exclusively confined to the very lowest orders of the people," was quoted as supporting their contention, but his explanation of this incidence—that "the indifference of the uneducated or badly educated was such that the number who availed themselves of the offer of vaccination was trifling"—was, as usual, ignored. With a strange confusion of cause and effect they ascribed to the increased facilities for isolation the decline of small-pox in London during the last five-and-twenty years, remarking that in 1871–2 only 31 per cent. of the deaths took place in hospitals, while in 1893 the proportion was 87 per cent. But they did not note that the total deaths were respectively 9657 and 206, and that the isolation of the 87 per cent., or 179, was far easier than that of the 31 per cent., or 2994. Dr. Russell of Glasgow had written to Dr. McVail complaining bitterly of the use made by Mr. Picton and Dr. Collins of the statistics of that city, in attributing the successful stamping-out of small-pox to isolation and sanitary reform; whereas he had distinctly maintained that, in his opinion, hospitals could not be looked on as more than auxiliary means, and were, perhaps, not without a certain amount of danger to the public, but that vaccination and re-vaccination had been carried out in Glasgow to an extent probably unparalleled elsewhere, so that the common lodging-houses and casual wards were for a time almost converted into vaccination stations. The dissentients formulated their scheme for the protection of a community, recommending early notification, ample hospital accommodation, vigilant house-to-house inspection, prompt removal of patients, supervision and quarantine for the most part in special stations, of persons exposed to infection, the disinfection or destruction of clothing, &c., closure of schools, inspection of tramps, and other precautions, as well as compensation to persons for damage sustained by quarantine, &c. Did they, he asked, realise the cost, the hostility that such interference with the liberty of the individual would evoke from the people who had conscientious objections to compulsion of any sort, and the risks of evasion, of concealment, and of failure in early diagnosis? Perhaps they did, for in recommending the retention, "in deference to popular belief," of the entire existing machinery for vaccination and the supply of lymph "they seemed to have more faith in vaccination and less faith in isolation than they were willing to admit even to themselves."

Brigade-Surgeon-Lieutenant-Colonel PRINGLE wished that the anti-vaccinationists could see what he had seen in India in epidemics of small-pox—the ground strewn with rotting corpses, incomparably more ghastly than in the case of cholera, when they lay calmly like Sennacherib's hosts; or districts where 90 per cent. of the population were hideously marked, while in others, where vaccination or the perfected system of attenuated inoculation had been long practised, the faces of the people were as unmarred as in this country.

Dr. ACLAND, in his inquiries into alleged injury from vaccination, had found none that would bear investigation. As to syphilis the disease had always been congenital, and erysipelas was invariably a post-vaccinal wound infection; there was no evidence of the transmission of tubercle, and in the very few alleged cases of leprosy and lupus the existence of the disease in the vaccinifer was a groundless assumption.

Dr. COUPLAND remarked on the difficulty of providing sufficient accommodation for isolation, and showed some instructive graphic representations of the age incidence and fatality of small-pox on the vaccinated and unvaccinated in Leicester, Dewsbury, and Gloucester.

Other speakers followed, and the discussion was continued until a late hour.

HUNTERIAN SOCIETY.

Exhibition of Specimens.

AN ordinary (pathological) meeting of this society was held at the London Institution on March 10th, Dr. G. E. HERMAN, President, being in the chair.

Dr. ARTHUR DAVIES showed a Heart taken from a girl eight years of age, which exhibited a marked condition of Malignant Endocarditis affecting the mitral valve and part of the left auricular wall. Infarcts were found in the spleen and kidneys.

Dr. SCHORSTEIN showed the Heart of a man, aged forty-one years, in which the mitral and posterior aortic valves were affected by Malignant Endocarditis. There were infarcts in the kidneys, but no albumin or blood at any time was found in the urine. Infarcts were found also in the left middle cerebral artery and the superior mesenteric artery, with an aneurysm which had burst into the peritoneal cavity.—Remarks were made by the PRESIDENT, Dr. SEQUIERA, Dr. ADAMS, and Dr. F. J. SMITH.

Dr. SCHORSTEIN also showed a specimen of Acute Colitis with Perforation in the Sigmoid Flexure. The patient had pneumonia, with an alcoholic history. The bacillus coli was not found in the colon, but was present in the lung.

Mr. TUBBY quoted a case of Rice-water Stools followed by a very foul empyema.

Dr. T. GLOVER LYON showed a Kidney affected with Miliary Tubercle taken from a patient with severe heart disease. There was no deposit in the lungs, but between the bladder and the rectum a deposit was present.—Remarks were made on the relation between heart disease and tuberculosis by Dr. HINGSTON FOX, Dr. SCHORSTEIN, Dr. A. DAVIES, and Dr. LYON.

Dr. PERKINS showed a Stomach with Ulceration Opening into the Splenic Artery, causing Fatal Hæmorrhage, in a woman aged sixty-six years.

Dr. F. J. SMITH showed a specimen of Tuberculous Meningitis taken from a girl, where there was entire absence of symptoms with the exception of rather severe headache at the onset, mental dulness passing into coma, and great activity of the knee-jerks. He also showed a specimen of Tumour of the Brain, situated at the base and involving the corona cerebri and the right optic tract. There was no observable symptom till within thirty-six hours of death.

SOUTH-WEST LONDON MEDICAL SOCIETY.

Acute Inflammation of Bone in Children and Young Persons.

A MEETING of this society was held in Wandsworth on March 10th, Dr. BENJAMIN DUKE being in the chair.

Mr. EDMUND OWEN gave an address on a Common and an Acute Inflammation of the Bones of Children

and Young Persons which sometimes Escapes Recognition. He said that the disease he referred to was known as acute septic osteomyelitis, although it had been called by various other names. Everyone admitted the importance and danger of the affection. It was referred to by the late Dr. Bristowe in a paper written in 1862,[1] who pointed out its distinguishing features and stated that it was often mistaken for rheumatism. Chassaignac had also written about it in 1857, stating that its cause was obscure, but that it was possibly of a "scrofulous" nature. He had also said that it is essentially a disease of young people, and is "very rarely found over the age of seventeen." Mr. Owen next described the pathology of the disease. He showed how micro-organisms are especially prone to affect the junction of the diaphysis with the epiphysis in long bones, this being the point at which new and delicate tissue is formed and growth is most rapid. It is here that the disease in question almost always commences. The organisms may be introduced into the body by means of damaged food or impure air or water. They affect the tissue of the part described and there elaborate a poisonous ptomaine. Abscess rapidly follows, and the staphylococcus pyogenes aureus is always found. (Specimens were exhibited showing the morbid changes.) The disease is a common one; out of 165 cases collected by Mr. Owen 96 were in males and 69 in females, the figures working out at about five boys to three girls. In these 165 cases the femur was affected in 83, the tibia in 47, and the humerus in 20. Next in order came the fibula, and in still smaller proportions came the radius, ulna, clavicle, and os calcis. The chief predisposing causes are depression of the system, fatigue, and, above all, injury of the part. It is apt to come on in young recruits after a fatiguing march. The local symptoms are those of deep-seated acute inflammation, pain, great tenderness on pressure, early redness and heat of the surface, especially where the bone is thinly covered with muscle. The constitutional symptoms are those of fever due to absorption of ptomaines; there are headache, delirium, and high temperature, rigors in adolescents, and convulsions in children. Many of the subjects of the disease die quickly from pyæmia. The question of diagnosis is important, as the disease may be, and has been, very often mistaken for rheumatism and erysipelas. The characteristic points are (1) the part of the bone affected, and (2) the marked tenderness on pressure, even when there is no redness. In rheumatism the joint itself is affected, and not the parts above or below. In erysipelas all the local symptoms are superficial. In periostitis the same applies, and the shaft of the bone will probably be primarily affected rather than the end. The treatment is by early incision, and, whether pus be found or not, the bone should be drilled or gouged. In some cases (especially in infants) the adjacent joint is attacked, and it must then be laid open and irrigated. Occasionally amputation is necessary or the patient may die from acute septic poisoning. Other bones and joints are often secondarily affected, and Mr. Owen showed a case illustrating this in which the inferior diaphysis of the left femur was first attacked, then the right humerus, and subsequently the right knee-joint.

The PRESIDENT and Dr. GILBERT RICHARDSON having briefly thanked Mr. Owen for his address, the latter answered several questions put to him by members, and the meeting terminated.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Primary Tuberculous Tenosynovitis.—Pathology of Mixed Abortion.—Sarcoma of the Forearm.—Exhibition of Specimens.

A MEETING of this society was held on March 10th, Dr. T. HARRIS, President, being in the chair.

Mr. THORBURN and Dr. MOORE showed specimens of a case of Primary Tuberculous Tenosynovitis removed by the former from the extensor aspect of the wrist. The disease had originated in the sheath of the extensor minimi digiti, which tendon was infiltrated and almost destroyed, while the sheath for the common extensor tendons was only secondarily invaded. Mr. Thorburn dwelt upon the importance of recognising "compound ganglion" as a tuberculous lesion and on the necessity for its careful excision, as well as upon the perfect functional result obtained in the hand thus treated. Although among children tuberculous tenosynovitis is more common in the ankle, in adults it generally involves the region of the wrist, the probable reason being that adults throw a far greater strain upon the latter joint than do children, hence also the comparative frequency of tuberculous disease of the wrist-joint itself in the adult as compared with the child. Macroscopically, the sheath presented a dark red, succulent appearance. It contained a small collection of fluid at its upper end and a single rice-body. The interior of the sheath was generally the seat of irregular fungosities and deposits of fibrin. Microscopically it corresponded closely with the descriptions of previous observers.

Dr. W. E. FOTHERGILL gave a demonstration on the Pathology of Missed Abortion. The changes which occur in ova retained in utero for several months after the death of the fœtus were demonstrated by means of drawings, photo-micrographs, and sections. When the fœtal circulation ceases the vessels of the placenta are rapidly obliterated, the fœtal epithelium degenerates, and the maternal blood between the villi forms clots which are altered later into dense laminated fibrin. The decidual cells then multiply and invade the fibrin, which they gradually replace, filling the intervillous space with layers and bands of decidual tissue. At the same time the decidual cells disintegrate the fœtal epithelium, covering the chorion and its villi. This comes to be represented by scattered heaps and rows of nuclei, and finally disappears. The amnion remains almost unaltered, but adheres closely to the chorion, and the united membranes are thrown into folds and convolutions covering the rounded lobes of altered placental tissue. The fœtal portion of the placenta does not grow after the death of the fœtus, though the maternal portion containing the decidual cells remains active. It is therefore improbable that malignant new growths can arise from fœtal placental elements.

Mr. C. E. RICHMOND described a case of Sarcoma of the Forearm with malignant family history occurring in a girl aged nineteen years. The father's aunt died from cancer of the breast, and the father's brother died at the age of thirty-four years from tumour of the thigh, which developed after injury. Of the mother's sisters, one died at the age of sixty years from cancer of the face, which developed after injury, and another died from tumour of the womb. In the present case there was a history of less than five months' duration, in which, from a slight enlargement, the left wrist had reached nineteen inches in circumference. The tumour was a periosteal sarcoma commencing at the lower end of the radius. Microscopically it consisted of large spindle and large round cells.

Mr. RICHMOND also showed a specimen of an Unusual Condition of the Spleen. In life it had occupied almost the entire left half of the abdomen, but did not enter the true pelvis. There were no marked symptoms of leucocythæmia, though the blood showed certain variations from the normal, and no history of ague or of syphilis. At the necropsy the spleen was found to be enormously enlarged and to be enclosed at its upper and back parts and sides by a thick layer of very dense fibrous tissue, which, though not very vascular, contained bloodvessels, some of them of the size of the radial artery. The spleen pulp was hardly anywhere normal, and on section showed strands and stellate masses of similar dense fibrous tissue. Microscopically the lobules of the spleen pulp were seen to be separated and compressed by fibrous bundles. The growth surrounding the spleen was outside the capsule and consisted of simple fibrous tissue. The view was advanced that it consisted simply of "organised inflammatory deposit."

The following card specimens were shown:—

Dr. BRINDLEY: (1) Adventitious Spleens; and (2) Aneurysms Bulging into the Right Auricle and Rupturing into the Pericardium.

Dr. HARRIS and Dr. RITCHIE: Lung affected with Chronic Pneumonia and Bronchial Dilatation.

Dr. HARRIS: Chronic Capsulitis of the Liver and Spleen.

Dr. RAY: Aortic Aneurysm with Secondary Aneurysms of the Carotid and Subclavian after Ligaturing.

[1] Transactions of the Pathological Society.

LIVERPOOL MEDICAL INSTITUTION.

Dacryocystitis.—Cases of Stone in the Bladder.—Hysteria in Gynæcology.—Folliculitis Decalvans.

A MEETING of this society was held on March 11th, Dr. A. C. E. HARRIS Vice-President, being in the chair.

Mr. EDGAR BROWNE opened the adjourned discussion on the Treatment of Dacryocystitis, the paper introducing the

subject having been read by Mr. H. E. Jones at the last meeting. Mr. Browne said that treatment must be founded upon a knowledge of physiological and pathological conditions and should aim at restoring the organ as nearly as possible to its natural state, but many of the methods in vogue violated these conditions. The canaliculi were capillary tubes and had purposely been made small by nature. If nature had designed a drain-pipe she would have made it larger. The collecting sac and discharging duct were potential tubes, capable of dilatation, but not habitually dilated. The inferior opening was exceedingly small. The apparatus was of the nature of a syphon, acting by suction and capillary attraction, and not simply by gravitation. The necessity of preserving the capillary character of the canaliculi had led him many years ago to suggest partial slitting of the wall. It was essential to preserve a portion of the tube, and not convert it into a gaping groove. He therefore used small probes and endeavoured not to overdistend the nasal opening, or, indeed, any part of the passages. Stricture was not a primary cause of obstruction, but the result of inflammation of the duct. The primary cause was bacterial infection of the lining membrane of the duct and the vascular structure surrounding it. His treatment by irrigation had stood the test of years. He would reserve the style only for exceptional cases where the structures had become distorted by long-continued inflammation.—Mr. H. E. JONES, in reply, said that the controversy as to the relative importance of inflammatory swelling or true stricture of the duct as causes of mucocele had been going on for nearly two hundred years. He was convinced that the prolonged use of probes and styles often irreparably damaged the canaliculus and occasionally caused stricture of the duct.

Mr. RUSHTON PARKER related in outline the clinical features of ten cases of Stone in the Bladder occurring in nine male patients. Four were subjected to lithotomy and four to lithotrity, whilst on one both operations were performed. Of the five cases of lithotomy two were boys aged eleven years. In one the lateral perineal operation was performed, and in the other the suprapubic operation. Both calculi were oxalate of lime. Two of the cases were men aged sixty-six and sixty-nine years respectively; both these calculi were phosphatic, with cystitis and ammoniacal urine and previous retention, due in one case to stricture and in the other to enlarged prostate. In the fifth case—a man, aged forty years—the stone was also chiefly phosphatic, with a nucleus of uric acid. In this case a calculus was found in the roof of the bladder a month after lithotrity had been performed. Of the five cases of lithotrity one was a man aged sixty-two years; the stone weighed three-quarters of an ounce. The patient returned to his home in a week and is now well. The next patient was forty years of age; the stone weighed a quarter of an ounce. After the crushing operation his symptoms were improved, but a month later lateral lithotomy was performed as stated above. The next patient was a man seventy years of age, from whose bladder a phosphatic calculus and about four inches of indiarubber catheter were removed by the lithotrite. The next case had an oxalic calculus weighing a few grains, and the last of the series had a phosphatic calculus formed round a nucleus of "chewing gum," a stick of which he had passed into his urethra.

Dr. IMLACH read a paper on the Place of Hysteria in Gynæcology. Following popular usage, he claimed that the term hysteria should only be applied to a special disorder of mental and physical development in girls and young women, and should not be extended to the functional neuroses of men.

Dr. STOPFORD TAYLOR showed a case of Folliculitis Decalvans in a man aged thirty years. The inflamed follicles occupied the outer two-thirds of the right thigh, surrounding a small bald pitted area the size of the palm of the hand. The disease had previously affected the corresponding region on the other limb, and the skin there was also perfectly bald.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Tubal Abortion.—Broad Ligament Cysts.—Anti streptococcic Serum in Puerperal Toxæmia.—Vesical Calculi deposited on Silk Sutures.

A MEETING of this society was held on Feb. 24th, Dr. MALCOLM BLACK, President, being in the chair.

The PRESIDENT referred to the death of Sir Spencer Wells, one of the society's honorary presidents, and it was resolved to send an excerpt from the minutes to his relatives expressive of sympathy in the loss that they and the profession had sustained.

Dr. JENKINS read notes of three gynæcological cases from the Victoria Infirmary, Glasgow. The first was a case of Puerperal Fever, interesting chiefly from the fact that the great omentum was adherent to the parietal peritoneum, projected into the pelvic cavity, and formed the greater part of pelvic swellings on both sides of the uterus, which at the first examination under chloroform were believed to be inflammatory and of tubal or ovarian origin. Puncture in such cases was in the highest degree dangerous, and he believed that the radical vaginal operation was the only one that need be considered. The second case was one of Tubal Abortion. At the abdominal section the appendix vermiformis was found to be thickened and adherent; the right ovary was as large as a hen's egg and contained dermoid material, but showed a fresh corpus luteum in the small part of normal ovarian tissue left. The right ovary and tube and the appendix vermiformis were removed. The patient made a good recovery. The third case was one of Congenital Absence of the Portis Vaginalis Uteri and Patency of Gärtner's Duct.

Dr. EDGAR described three cases of Broad Ligament Cysts, in two of which he had performed abdominal section—in the one for a small intra-ligamentous cyst on the right side and a hæmatoma of the left ovary, and in the other for a parovarian cyst of the right broad ligament with matting together of the left ovary and tube, which contained pus. In his third case, in which there was a tense elastic mass posterior to the uterus and reaching from side to side of the pelvis, he operated through the posterior vaginal fornix. After curetting the uterus and amputating a rather large cervix with stellate laceration, he opened into the pouch of Douglas, punctured the cyst, pulled it down, and removed it.

Dr. A. W. RUSSELL reported a case of Puerperal Toxæmia with symptoms of Mania in which the anti-streptococcic serum had been used and recovery had followed.

Dr. RUSSELL also showed Fragments of Vesical Calculi removed from a patient upon whom Cæsarean section had been performed five years ago. Several of the pieces had as their nucleus a bit of silk suture and in one the knot was seen. This was the second case that had come under his observation.—Professor MURDOCH CAMERON, who had performed both of these Cæsarean operations, gave some account of the cases.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Bubonic Plague.

A MEETING of the Section of Pathology was held on Feb. 26th, Mr. J. B. STORY being in the chair.

In the absence of Dr. JOSEPH REDMOND, the sectional secretary (Dr. MCWEENEY) demonstrated Microscopic Preparations by Dr. Yersin of the Plague Bacillus discovered by himself (Dr. Yersin) and (independently) by Dr. Kitasato. One of the slides was a gentian-violet stained smear preparation from the bubo of a Chinaman who died at Hong-Kong from the disease, and showed enormous numbers of short oval bacilli in pairs and single forms, with an unstained spot in the centre like the bacillus of chicken cholera, lying amongst the lymphoid elements and pus cells. The other was a preparation from the blood of a mouse which had succumbed to septicæmia consequent on the inoculation of a pure cultivation of the bacillus. Here the organism took the shape of a diplococcus or very short diplo-bacillus. The speaker then gave a *résumé* of present knowledge of this organism, including its *habitat* in the soil, its tendency to attack rats, &c., through which its virulence became so heightened that it could attack the healthy human system, and the successful results claimed by Yersin for sero-therapeusis. He concluded by quoting a specimen of the directions said to have been issued by the Royal College of Physicians of London for the cure of plague during the last great visitation in 1665: "Pull off the feathers from the tails of living cocks, hens, pigeons, or chickens; and holding their bills, hold them hard to the botch or swelling, and so keep them at that part till they die, and by this means draw out the poison. It is good to apply a cupping glass, or embers in a dish, with a handful of sorrel upon the embers."—The communication was discussed by Mr. STORY and Dr. PARSONS, and Dr. MCWEENEY replied.

Reviews and Notices of Books.

Vita Medica: Chapters of Medical Life and Work. By Sir B. W. RICHARDSON, M.D., LL.D., F.R.S. London, New York, and Bombay: Longmans, Green, and Co. 1897. Pp. 496. Price 16*s*.

THERE is something very pathetic in the last chapter of this book taken in conjunction with the preliminary note prefixed by the author's son, which runs as follows: "These chapters of 'Vita Medica' were finished by my father on Wednesday, Nov. 18th, 1896, just before eight in the evening. At ten o'clock he was seized with the illness which ended fatally on Saturday morning, Nov. 21st." The last chapter commences: "But I must close somewhere, and it is at this point." Irresistibly on reading these passages the words of Thackeray rise to our minds: "Yet a few chapters more and then the last; after which, behold Finis itself come to an end, and the Infinite begun."

The book is in no sense an autobiography, but rather a collection of various reminiscences, set down just as they occurred to the writer, without any particular regard for order of time. In the first chapter Richardson relates how in his young days he met with a Dr. James Bird, and how the two attended a meeting at which sanitary questions were discussed. Richardson was "very plain in stating that we might by good management pull down our current death-rate to 15 in the 1000, perhaps to 12, and even to 10." Bird derided him and begged the audience to accept these ideas as from one who "was given to ideals—who let ideals take the place of data." Events have shown that Richardson was not so very far wrong in this particular instance; but in many cases we fancy that Bird's estimate of him was not undeserved. Richardson went to school in Leicestershire, and about that time lost his mother, to whose early training and care he owed a debt which he never forgot. She was a Calvinist, and was attended in her last illness by a medical man of the same persuasion. On Mrs. Richardson expressing her belief that she was one of the elect the physician remarked "that he had known many who had closed their eyes in sight, as they believed, of a glorious Heaven and had opened them, as he believed, to their amazement in a very different place." That medical man was asked not to call again. There is an interesting account of a meeting with Disraeli in a dress which recalls the description of Jingle. They met on the platform of Syston station, and the station master remarked prophetically: "He's a wonderful young man is that; gets into and out of debt, writes stories, and I shouldn't wonder if some of you live to see him a Minister of the Crown." Twenty years after they met again in the street, and Disraeli at once recognised his face. After serving his apprenticeship to Mr. Hudson of Somerby, Richardson entered at Anderson's College, Glasgow, where his principal teachers were Burns, Knox the anatomist, and William Thomson. Here he saw the first operation performed in Scotland under an anæsthetic—namely, ether—a sight wonderful enough even now, though so common that no one thinks anything of it, but that to one accustomed to the pre-anæsthetic operations must have seemed miraculous. Of such Richardson says, "I rarely knew any person who had positively made up his or her mind to undergo the operation, shrink from it at the last moment from fear of pain, and I rarely if ever saw one shed tears during the infliction of the pain"; but he also says that when the pain began patients would insist upon the operator stopping, and while he continued said nothing but "Make haste, make haste." While in Glasgow Richardson nearly died from a form of fever then prevalent, apparently relapsing fever, and on his recovery answered an advertisement in THE LANCET and became assistant to Mr. Thomas Browne of Saffron Walden in Essex. After this he went as assistant to the brother of the Mr. Hudson to whom he had been apprenticed, and from there went to Mortlake as partner with Dr. Willis. This period was really the starting point of his life's work. Here he met the lady who became his wife; here he collected materials for the Fothergillian Prize Essay and formulated the first idea of the lethal chamber. In 1853 he came to London and worked at the subject of the blood and its coagulation, coming to the conclusion that this depended upon the evolution of ammonia—a view he afterwards modified, although he maintained to the end the soundness of the principle that coagulation depends upon the evaporation of a volatile spirit. This theory led him to use ammonia as a solvent for thrombi and cardiac fibrinous exudations, sometimes with success, and once, as he honestly records, with fatal result from pulmonary embolism. Perhaps Richardson's greatest work lay in his efforts to promote sanitation, and the outcome of his work was the delivery of the paper on Hygeia, the City of Health, read at the 1875 meeting of the Social Science Association at Brighton. This address, if somewhat Utopian in its ideas, gave an enormous impetus to schemes of sanitary reform. It was widely noticed at home and abroad, and was even made the foundation of a novel by Jules Verne. We have not space here to notice the many other investigations in which Richardson took part, but must refer our readers to the book itself. All his theories—though it must be allowed that they are sometimes visionary—bore the stamp of earnestness and of a full consciousness like that of Newton that there were an infinity of things of which he was ignorant. He was deeply interested in the mystery of life and impressed with the expression, "God is light," as being some sort of explanation. "Truth," said Plato long ago, "is the body of God, and light is His shadow." "There are other powers," said Richardson (besides light and heat), "spiritual essences, according to our limited appreciation, but they are as mighty as subtle, and the breath of life is one of them."

We would suggest to the publishers that in the next edition an index might be supplied with advantage.

A Text-book of Comparative Anatomy. By ARNOLD LANG. Translated by HENRY M. BERNARD and MATILDA BERNARD. Part II. London: Macmillan & Co. Price 17*s*.

THE first part of this work appeared in 1891 and contained an account of the Protozoa, Cœlenterata, Platodes, Vermes, and Arthropoda. The present part deals with the Mollusca, Echinodermata, and Enteropneusta, and thus brings the description of the Invertebrata to an end. In its general plan the present part resembles in almost every respect that of its predecessor, and we are happy to be able to express as warm an appreciation of the labours of author and translators as we did on the last occasion. The work commences with a systematic review of the mollusca, followed by a hypothetical description of a primitive mollusc. Next, the outer organisation of typical forms of the chief groups are compared one with another and also with the above-mentioned primitive mollusc. The various systems are then considered in the following order: integument, shell, mantle cavity, respiratory organs, head, foot, musculature, and nervous system. Here there is a pause for a most interesting discussion on the causes of asymmetry in the gastropoda. Then the rest of the systems are dealt with, the sensory organs, alimentary canal, circulatory system, body cavity, nephridia and genital organs. After the devotion of a few pages to the subject of parasitic and attached gastropoda, the ontogeny of the mollusca is dealt with, Chiton, Dondersia, Paludina, Dentalium, Teredo, Cyclas, Anodonta, and Sepia being taken as types. The phylogeny of the molluscan phylum is next briefly considered, the author favouring a turbellarian ancestry for it, and the article is brought to a close by a review of the most

important literature of the mollusca carefully arranged under various heads.

This review of the treatment of the mollusca will serve to show the reader the scope of the work, since the echinodermata and enteropneusta are handled in a similar manner. The illustrations are copious, well executed, and carefully chosen, but we regret to see in some places the false economy of numbering the different parts and then telling the reader that the numbers are the same as in some former picture. In this way two or three illustrations have sometimes to be searched before a difficulty is cleared up, and when this happens often the whole thread of the subject may be lost. In the present instance, however, the fault does not occur very often, and we are the less disposed to lay stress on it since the descriptions in the text are so clear that a glance at the illustrations usually suffices.

The Natural and Artificial Methods of Feeding Infants and Young Children. By EDMUND CAUTLEY, M.D. Cantab. London: J. and A. Churchill. 1897.

WE entirely agree with the remarks with which the author of this useful little work introduces the subject to notice. He rightly points to the regrettable infantile mortality from gastro-intestinal affections, and points out how largely preventable such mortality would be if only more intelligence were brought to bear on the conditions of healthy feeding. He is to be commended for his endeavour to place the subject on a rational and scientific basis, and it is to be hoped that he will not have written in vain, and that more attention will be paid in the training of medical men in the important principles which he here so amply illustrates. We do not think that Dr. Cautley needed to apologise for inflicting on the medical reader a book of this class, for we feel sure that if its contents are thoroughly mastered the practitioner will be much assisted in his methods of treating the commonest and most troublesome of infantile derangements. The book is carefully planned, so as to take the reader step by step through the critical periods of infancy, when so much depends upon correct management of diet. The condition of the mother, the management of lactation, the composition and changes in human milk, the composition of cow's milk, its sterilisation, &c., are discussed with detail and an abundant use of the knowledge gained by physiological chemistry. A very useful chapter is that devoted to Proprietary Foods, the use of which is often so indiscriminate. The diet after weaning, with regard to which further advice is given, is of quite as much importance as that of an earlier period of life. Chapters are also assigned to the Feeding of Premature Infants and to the Growth of Infants and Children, whilst appendices contain instructions for the preparation of foods and directions suitable for mothers of hospital out-patients. There can be no question that a book of this class was needed, and we do not think that the subject could be more satisfactorily treated.

The Bacteria of the Sputa and Cryptogamic Flora of the Mouth. By FILANDRO VICENTINI, M.D. Translated by Rev. E. J. STUTTER and Professor SAIEGHI. London: Baillière, Tindall, and Cox. 1897. Pp. 239. Price 7*s.* 6*d.*

THESE memoirs are translated from the "Atti della R. Accademia Medico-Chirurgica" of Naples. Dr. Vicentini has bestowed a large amount of time and labour upon the microscopic observation of the micro-organisms of the mouth and sputa. His studies have resulted in views or suppositions which are more or less directly at variance with the accepted facts of bacteriology and with the opinions of competent observers all over the world. If he were able to adduce any satisfactory evidence in support of his contentions, and if the methods he seems to have employed in his studies were sufficient by themselves to form an adequate basis for generalisation, no complaint could be made; but this is far from being the case. Dr. Vicentini appears to regard the methods of cultivation and experiment with distrust and has confined his attention to morphological observation alone, using very high powers of the microscope. As a result he is disposed to regard the tubercle bacillus, the gonococcus, and the diplococcus pneumoniæ as varieties or phases in the life history of one single organism—leptothrix buccalis, or, as he prefers to term it, leptothrix racemosa. We should add that these suggestions are made with the greatest modesty and diffidence. There is much to be said in favour of the pleomorphism of many bacteria, but such sweeping views as those here suggested naturally demand proof of the most rigorous description, and this is, in our opinion, not forthcoming.

In the first memoir the author details his microscopic researches into the sputum of whooping-cough, describing the presence therein of large quantities of "myelin," amounting sometimes to several grammes in twenty-four hours, and this he conjectures to be derived from the medullated nerve fibres of the air passages. This view of the pathology of whooping-cough would stand a better chance of acceptance if it were shown that there were enough nerve fibres there to furnish this continuous excretion and if proof were brought forward that the substance in question was actually myelin. The bulk of the book is devoted to morphological observations on the flora of the mouth and sputa. The observations are minute and detailed and they are illustrated by excellent coloured plates. They would constitute a valuable addition to our knowledge of the life-history of leptothrix could we have any confidence that they all really referred to one species. The conclusions, however, to which Dr. Vicentini is ultimately led will, we fear, only impress upon the reader the fallibility of even the highest powers of the microscope uncontrolled by other methods of bacteriological research. Professor Miller of Berlin, who writes a preface to the present work, is careful to dissociate himself from any participation in the author's views. The translation, though readable, is often obscure, and it abounds in technical inaccuracies.

A Pictorial Atlas of Skin Diseases from Models in the Museum of the Saint Louis Hospital, Paris. London: The Rebman Publishing Company. Price 10*s.* 6*d.*

WE have before us Part VII. of this interesting publication. Plate 25 shows an ulcerating eruption on the back, which on Brocq's authority is labelled Bromide Eruption. The patient, however, was a syphilophobe and had been taking iodide as well as bromide of potassium, and the large pus-containing bullæ are rather more suggestive of iodide than bromide. Plate 26 is called Hypertrophic Papular Syphilide situated on the upper part of the chest. Jacquet calls them vegeto-papulo-erosive lesions identical with hypertrophic mucous patches, or condylomata of moist regions of the skin. He suggests that their presence in such an unusual position and of so large a size is due to the neglect and squalor of the patient. Plate 27 represents a lupoid syphilide and Plate 28 has two figures—a gangrenous tubercular syphilide and a gangrenous gumma. The various lesions are faithfully reproduced and continue an interesting series of representations.

Ligaments: their Nature and Morphology. By J. BLAND SUTTON, F.R.C.S. Eng. London: H. K. Lewis. 1897. Price 4*s.* 6*d.*

WE are pleased to welcome a revised edition of this admirable little work, which was first published ten years

ago. It has undergone some slight re-arrangement and some alterations in the author's views have been made, but in the main it follows the lines of the former edition. The formation of ligaments by the metamorphosis, regression, and migration of muscles, and by the degeneration of bony and cartilaginous tissues, is most clearly and interestingly shown. The ligaments of the extremities, pectoral and elvic girdles, larynx, and vertebral column are considered in order with regard to their morphology, and the student will be surprised to find how interesting the author has made the subject. It is a very valuable contribution to philosophic anatomy and one of the best scientific works that has appeared in recent years.

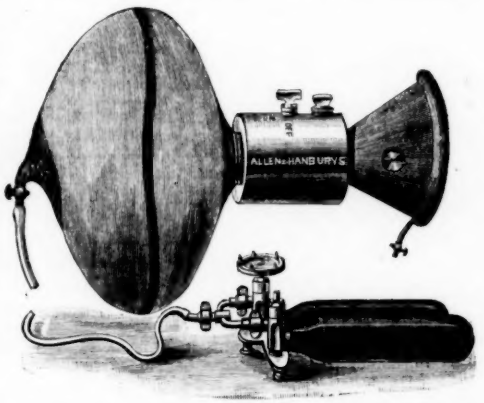
JOURNALS AND REVIEWS.

Zhurnal Meditzinskoi Chimii i Pharmatzii (*Journal of Medical Chemistry and Pharmacy*). December, 1896.—This Russian journal is published and edited by M. Poehl, a chemist of reputation in St. Petersburg. Much of the present number is taken up by articles by the editor and other observers on the nature and action of a proprietary preparation known as "Spermin-Poehl." As its name implies, this is an animal extract prepared much in the same way as that originally described by Brown-Séquard. "Opoovariinum-Poehl" is an analogous preparation of ovarian substance, which is said to be of use in relieving morbid symptoms appearing at the climacteric period. Articles on this use of ovarian extracts by Professor Landau and Dr. Mainzer of Berlin, which have appeared in the German journals, are here inserted in full. Over fifty pages of the present number are devoted to the answers received from various sources to a list of questions previously issued by the editor dealing with the clinical effects of his preparation of spermin. The questions and answers are printed in the four languages, Russian, French, German, and English. The individual replies, of which M. Poehl appears to have received a large number, are condensed into brief sentences, all of a highly laudatory character. The method savours too much of the advertising tactics pursued by the proprietors of quack medicines to be commended. It is probable, also, that some negative or even adverse replies were received, and these should have been published side by side with the favourable ones, if the preparation in question is to be regarded as other recognised therapeutic agents and not as a mere proprietary remedy.

New Inventions.

IMPROVED ETHER INHALER.

MANY of the ether inhalers in present use have a very constricted air-way, and, in fact, a feeling of oppression arises when breathing through them even before the ether is turned on. As a result of such mechanical obstruction cyanosis, a large pupil, and laboured breathing are witnessed during the subsequent anæsthesia. I have long been desirous of providing an ether inhaler with a really free breathing channel, because I believed that if this asphyxial factor were abolished the induction of anæsthesia would be more pleasant to the patient and the resulting condition during operation would also favour the diminution of after-effects. The accompanying illustration shows a metal expansion chamber which I have designed to meet the requirement. Its weight is the same as that of a small Clover's inhaler, but it contains six ounces of ether, and does not therefore require filling during an hour's operation. It requires no water-jacket, because the heat absorbed and rendered latent by the evaporation of ether is not removed from the liquid in the reservoir, but from the patient's breath alone. It consists of a cylindrical reservoir for ether which surrounds a breathing channel two inches in diameter; a small metal shaft runs vertically from the tap above, through the breathing channel, communicating below with the ether chamber; a hollow metal plug fits this shaft, and through a pinhole in the axis of the breathing channel a fine stream of ether is directed upon the sponge through which the patient breathes. The warmth supplied by the administrator's hand holding the cylinder is enough to cause a rise of temperature within it of from 10° to 15° C., which produces a force of expansion and vapour tension in the chamber equal to a pressure of 27·24 c m. of mercury, and this on the principle of Dalton's law, is sufficient to propel a stream of ether from the pinhole orifice until the cylinder is empty. The type of anæsthesia produced by the inhaler in more than seventy cases for which it has been used fulfils my expectations very perfectly. It presents a smaller pupil than usual and a very bright colour; the breathing, though deep, is remarkably free from stertor, and the induction even



with ether alone is quiet and smooth. The cylinder can be filled and carried about in that condition without any leakage; there is no smell of ether at all before beginning the inhalation, and as the patient's breath does not pass into the reservoir ether left in it is absolutely uncontaminated. The administration of gas and ether is thus conducted. 1. Fill the cylinder with six ounces of ether through the stoppered apperture and screw this down tightly. 2. Turn on the ether tap to see that it works; then pack the sponge loosely into the breathing channel around the little trumpet orifice and especially below it. 3. Attach the bag with tubing from the gas bottle; then, after emptying the bag of air, a little gas is allowed to run into it and the face-piece is accurately applied whilst (if lying recumbent) the patient's head is turned towards the side. 4. After five inspirations turn on the ether tap, then off again, and during succeeding breaths the tap is opened and closed until, the sponge being wet, signs of ether narcosis supervene.

Messrs. Allen and Hanburys, of Wigmore-street, are the makers. To them I am indebted for much personal courtesy and the sparing of no effort in the production of every detail with accuracy and excellent workmanship.

H. BELLAMY GABDNER, M.R.C.S. Eng., L.R.C.P. Lond.
Welbeck-street, Cavendish-square, W.

MERTHYR TYDVIL GENERAL HOSPITAL.—The new accident ward added to the western side of the Merthyr Tydvil General Hospital was formally opened by Sir W. T. Lewis on Feb. 24th. The high constable of Merthyr, at the ceremony, stated that the Queen had been pleased to allow the ward to be called the "Diamond Jubilee Ward." It was stated that Sir W. T. Lewis had been instrumental in getting two donations of £1000 each from the Marquis of Bute, and had himself contributed £750 towards the building of the hospital, besides giving £1000 towards this new ward. It was announced that £1170 had been subscribed at the luncheon that followed, which included £400 from Sir W. T. Lewis and members of his family and £100 from the medical staff of the hospital.

THE LANCET.

LONDON: SATURDAY, MARCH 20, 1897.

THE success of the PRINCE OF WALES'S Hospital Fund for London in commemoration of HER MAJESTY'S long and beneficent reign is a matter of deep interest to ourselves and to the public. To ourselves we say, for it represents a scheme which we have long and specially advocated, and which we were fortunate enough to anticipate and urge as one particularly fit to be associated with an epoch in which medicine and surgery have advanced by strides and during which their methods have increased in gentleness as they have in efficiency. But the public is equally concerned in the success of the PRINCE'S Fund. English philanthropy is best illustrated in the voluntary hospitals. Englishmen do not like to be taxed; but they tax themselves for the support of these institutions, which will bear a favourable comparison with any hospitals of the world. It is true, as the PRINCE has well pointed out, that this self-taxation is a very limited matter. The hospitals and other charities are, or at any rate have been, supported by a mere handful of people. Whether we take London or the provinces, it is apparent that a large majority of the people, even well-to-do people, has been content to see the hospitals supported—or to see them starved—without dipping into its own pockets on their behalf. Not the least service done by His Royal Highness in this present year is to have brought out this fact. He has made it clear that, either from inadvertence or from want of sympathy—with characteristic good nature he adopts the former alternative—the ordinary well-to-do Englishman has acted as if the hospitals were fed from some secret or Divine source, and left somebody else to do the work of "the good Samaritan" while he "passed by on the other side." Henceforth there will be no excuse for this evasion of the plainest duty entailed upon comfortable and healthy people, to provide for those necessitous inmates of hospitals who are neither comfortable nor healthy. We heartily adopt the PRINCE'S theory, that the starvation of hospitals in the undoubtedly wealthy community of the metropolis has risen from "want of thought" and not "from want of heart," and henceforth we hope to see a rivalry in enlightened and self-denying liberality. The time is short. We do not believe in the indefinite prolongation of exceptional emotions. We are all enjoying the consciousness of the pleasure of living in the Victorian Era, in which the Throne has seemed to be the source and seat of every virtue that can sweeten and elevate the life of the nation. There is but one wish, and that is for its continuance. Let us none the less make much of it and of the thankfulness which it generates. It will be no slight monument of our gratitude if we can make our hospital treasurers take new heart of hope and fill their empty beds with sufferers that languish in ill-adapted rooms—of which, let it be remembered, there is a terrible tale in our very midst; for have we not been told of recent years of the disgraceful number of one- and two-roomed tenements, of people living within a stone's-throw of wealth and luxury under the vilest conditions, in numbers altogether equalling the population of a large provincial town?

We may be told that we are forgetting the abuse of hospitals, and the fact that institutions which were founded for, and have been hitherto placed at the service of, the poor "without money and without price" are now being used on commercial principles and bartered for petty sums that degrade charity and medical service at one stroke. We do not plead guilty to the charge of forgetfulness. Our columns from week to week show how (faithfully and vigilantly, we trust) we labour to bring back hospitals to their true use and to expose unflinchingly all abuses. Our readers will give us full credit for this. We shall not be content till we have eliminated from hospitals all those whose homes and whose circumstances admit of treatment and their recovery at home, and till we have reduced the out-patient department to proportions consistent with the advantage of patients on the one hand and the just interests of medical practitioners on the other. But there is a time for everything—a time for collecting money for an object, and a time for insisting on guarantees that the object shall be defined and distinct. We do not share Mr. BURDETT'S views, that the Hospital Sunday Fund and, by inference, the PRINCE'S Fund are collecting bodies, having at present but little responsibility for the use of what they collect. With every respect for Mr. BURDETT and his great interest in hospitals, we regard this as an ill-advised doctrine, which threatens seriously to injure such funds and the institutions the benefit of which they contemplate. We venture to believe that the council of the PRINCE'S Fund, not excluding His Royal Highness himself, hold no such narrow view of the duties incumbent on them; and in this belief we shall continue to wish them every success in their efforts. We are quite willing to assume their agreement with us that hospitals are for the poor, and that it is contrary to the interests of the poor, of the public, and of medical education to convert them into cheap dispensaries, alienating the working classes and classes better off from the private practitioners to whom they must always be most indebted for medical guidance throughout life.

The weak part of the voluntary hospital system is the uncertainty and precariousness of its income, and its reliance on small patrons, who are apt to think of personal advantage or the advantage of their dependents rather than of the true uses of hospitals and the superior claims of the poor. The best cure for this is the liberality of the liberal, of those who contribute to hospitals for the sake of the poor, and without the intention or the wish of personal advantage. For this reason, as well as for the honour of our illustrious QUEEN, we rejoice in the success of the PRINCE'S Fund. We should like to see every established hospital of repute made independent enough to lay down rules for its own administration and to adhere to them when laid down—a wish in no wise inconsistent with a Central Board so constituted as to

command the respect of individual institutions and to facilitate their beneficial and harmonious coöperation.

THE latest reports from India show that very elaborate and stringent arrangements have been made throughout that country for the application of the powers conferred by the Epidemic Diseases Act for limiting or preventing the spread of bubonic plague. In addition to all that has been already done in Bombay, and to the large augmentation of the medical strength that has been made for duty under the Bombay authorities during the continuance of the epidemic, an Executive Committee has been organised and vested with power to enforce and carry out the measures that have been devised for combating the scourge. The disease seems to be mainly confined to the city and to Bombay Presidency and Sind; it has now been present for some months in the former place, to which it has manifested a chronic sort of adhesiveness which is suggestive of its dependence upon local conditions for its incidence and persistence. In the extent or rapidity of its spread in India the disease has not been at all comparable to what has occurred in these respects in epidemics of cholera in that country. But the alarm that has been created in Europe by the presence of plague in India has, as we know, been great, and has led to the imposition of restrictive measures with very seriously paralysing effect on the commerce of that country. The impression left upon the mind from a broad survey and study of the facts making up the recent medical history of plague in the East is that it is largely a preventable disease, and to a far greater extent capable of being controlled and treated than might be inferred from the alarming descriptions of it in past history.

We cannot be surprised that, with such additional experience as France and other Continental nations could adduce, the very name of the disease should give rise to grave alarm; but people are nowadays disposed to take calmer and more moderate views, and that this is so is attributable to the fact that we now know more about epidemic diseases and the way of combating them. Notwithstanding much that still remains to be cleared up in regard to plague, the fact remains that we have learned more about its nature, causes, and treatment within the last few years than we ever knew before. We have ascertained from a bacteriological study of it that it depends upon an inoculable micro-organism; that it not only affects man, but the lower animals (rodents especially), and probably some insects (flies, for example); that it is, on the whole, a less infectious disease than had been supposed; that local conditions and an insanitary environment are necessary factors in furnishing a fitting soil for its spread and development; that its progress as an epidemic—as compared with cholera, for example—is relatively slow; and that there is every reason to hope that, as a result of our experimental methods of research, a relative immunity from attack may be conferred by prophylactic inoculation, and, when actually attacked, that a curative remedy is not beyond our reach if we continue to prosecute our researches on the lines which Dr. YERSIN and Professor HAFFKINE have indicated. While Dr YERSIN has prepared a serum which he regards as a curative agent in cases of plague, Professor HAFFKINE has succeeded in manufacturing a vaccine or protective lymph which will, he thinks, to a certain extent fortify the system against an attack of bubonic fever. Both the alleged curative and preventive plans of treatment are founded upon the results of the experimental methods of inquiry, and are the outcome of the modern science of bacteriological investigation. Our readers are already acquainted with the work performed by Dr. YERSIN in China in this direction, and with the belief which he entertained that he had succeeded in preparing a curative agent for the treatment of plague. He has now returned to Bombay, and entered upon his work there on the 6th instant. The effect of his remedy on plague patients only ill for a day or two is reported to be, according to the reply of the Earl of ONSLOW in the House of Lords on the 11th inst. to a question by Lord REAY, "surprisingly good," while more advanced cases are not so much benefited. Professor HAFFKINE has communicated the results of the scientific experiments instituted by him to the Standing Committee in Bombay. By means of culture experiments in different media he has been enabled to cultivate the plague bacillus in abundant and concentrated quantities, and has tested their virulence on large rodents. From these experiments as a starting-point he subsequently prepared other cultures which were deprived of their fatal properties, until he reached a harmless culture which proved protective against a dose of the living virus that would be speedily fatal to non-protected animals. With this he inoculated himself and subsequently some members of the medical profession. Lord ONSLOW now tells us that up to and including March 7th 2341 persons have been inoculated, of whom only two (in addition to two previously mentioned) have been attacked by plague; both attacks occurred within five days of inoculation, and both sufferers are alive. People are coming forward more freely to be inoculated, and the practice is extending. The Government of Bombay are preparing an organisation for the extension of depôts for purposes of inoculation and for instructing medical officers in the process. Steps are also being taken by the Governor for popularising prophylactic inoculation and for increasing the amount of lymph that can be produced. The Secretary of State will receive information weekly of the extent to which the practice is resorted to, with reports as to its efficacy. The results of a more extended trial Lord ONSLOW has offered to communicate to the House of Lords.

It would be obviously premature to pronounce any opinion at present as to the final outcome of these methods of dealing with the disease. We can only await the results with extreme interest. About the zeal and self-sacrifice of those engaged in prosecuting these investigations there cannot, in the meantime, be two opinions; and we think that both the Government of India and the Secretary of State for India are also deserving of great praise for the way in which they have facilitated and seconded the efforts of scientific medicine in these directions. It has been said that the Bombay authorities were to blame for not having adopted from the first all the sanitary and precautionary measures that are now being carried out, but it is proverbially not easy to be

wise in time, and it is a very serious thing for any Government to incur the responsibility of officially declaring the presence of plague in a city, with its attendant consequences to a community of mixed races and religions and to trade and commerce, until thoroughly assured of the fact. We are bound in fairness to recognise the difficulties of such a situation, and we may add that probably in no country in the world would the efforts to limit the spread of contagion and to combat and deal with difficulties have been more thoroughly undertaken and discharged than seems to have been the case in India, not only in regard to the pestilence of which we have been writing, but also in connexion with the great famine which is prevailing there at the present time.

PROFESSOR PAGLIANI of Turin, who holds the chair of Public Hygiene in the University (a department in which he has been one of the most trusted officers under Government), has just been allaying the panic of his compatriots in view of the plague in the Bombay Presidency—panic which, among other disastrous results, is hurting Italy on a side where she has every need of being spared—namely, her commerce. She has, he says, been following the example of Marseilles, which asked and obtained from the French Government the "boycotting" of every vessel hailing from the infected Indian ports. Palermo and Naples, in imitation of their French sister, have imposed on the Società di Navigazione the regulation that no ship of similar origin shall enter their harbours, thereby, he says, reviving the measures which proved so mischievous to commerce in the cholera epidemic of 1884–86 and also reviving the anarchical spirit of the communes in sanitary administration, when, as in those years, each commune acted for itself, to the prejudice of sound hygiene and to the damage of every interest, moral and material. In 1887 that spirit was, with infinite trouble, exorcised, but now it seems we are to have it rehabilitated. He hopes that other harbour towns—Genoa, for instance—will put their southern sisters to shame by ignoring such irrational means of defence. Meanwhile, he asks, "How is our commerce affected by the procedure of Palermo and Naples?" Italy's "movimento marittimo" (maritime intercourse) with the Indies constitutes more than three-fifths of such "movimento" as a whole, and her Government is in annual receipt of three and a half million lire collected as harbour dues from the Indian traffic alone, five million being the sum total of such receipts from all sea-faring traffic put together. From Palermo and Naples she is to forfeit these receipts, and from whatever other harbour towns follow suit! And what basis in science or in common sense exists for such panic? None whatever. Of course, he does not deny the danger of plague-stricken vessels with patients on board entering a largely frequented seaport. Ample means for obviating that risk are in working. But it is quite another matter in the case of vessels which, after a very long voyage, during which they are safeguarded in every way, approach the harbours. In such cases the period of incubation is long past; and as for soiled effects which these ships may carry there are means at every harbour of disinfecting them forthwith. It is therefore only from certain classes of goods that the suspicion of transmitted infection may arise. And here he gives the weight of his authority and experience to the declaration that "no proof exists of an epidemic of 'pestis bubonica' having been propagated by merchandise or by articles of private or domestic use"—except in the case of the latter when they have passed from the person of a patient without being disinfected. "Neither woollens," he proceeds, "nor skins, nor fleeces of any kind have ever transmitted an epidemic." Adducing epidemiological observations to prove this, he adds that from the bacteriological point of view the bacillus of plague has, so far as science is aware, such biological properties that even in the improbable case of a patient having directly or indirectly infected goods prepared for exportation it very quickly loses all infective activity in the transport of the goods themselves. A doubt has been raised as to whether the hides of animals which have died during the epidemic of plague may not convey the infection to a distance. But the apprehended risk vanishes with Dr. LOWSON'S demonstration, and still more after the investigations lately completed by Professor PAGLIANI himself and his colleague, Professor GIACOSA. Such hides in the dried state, even supposing that the "pestis bubonica" of man could declare itself in cattle, are, they showed, quite incapable of preserving alive the bacilli they, *ex hypothesi*, may have contained; the treatment they have undergone has made such life impossible. "Neither epidemiological reasons nor such as the laboratory can bring to the test can justify the prevailing dread of goods proceeding from plague-stricken localities—a dread fraught with damage to our commerce, to our national economy, and to our industrial classes.....It is difficult," he concludes, "to run counter to a popular current inspired by the gust of fear; it is far easier to win applause when one favours the prejudices of the crowd; but it is the duty of hygienist and philanthropist alike to defend in every case, not only the health of the masses, but also their sound judgment and the sources of their sustenance."

Annotations.

"Ne quid nimis."

THE TUNG WA HOSPITAL, HONG-KONG.

WE have received the blue-book dealing with the report of the Commission appointed by His Excellency Sir William Robinson to inquire into the working and organisation of the Tung Wa Hospital, Hong-Kong—a Commission which, to our minds, reveals the existence of a most serious state of matters in a British colony. We have read the report very carefully, and, although we may be thought presumptuous in differing upon the evidence therein set forth from those Commissioners who were on the spot and heard that evidence given, we cannot but think that the majority report, signed by three out of five Commissioners, is too optimistic. Even these gentlemen recommend a great many improvements as being desirable, among them the daily inspection of the hospital once, or more than once, by an officer of the sanitary board, the water carriage of excreta, regulations against overcrowding,

regulations for the cleansing of bedding, and, finally, more stringent laws for the prevention of infection. The Hon. C. P. Chater, while agreeing with the majority report, wishes to add that as to the work of the hospital as an institution for healing the state of matters is far from satisfactory. "We find doctors who have never been to any medical college ..... whose only test of knowledge is to be able to write a thesis to be approved of by their colleagues in the hospital, who permit men to die because they cannot or will not perform a simple operation. ..... We find, too, the horrible custom of herding the most foully diseased with their less afflicted fellow patients with the natural results, and, in fact, almost every law of hygiene slighted." The Hon. T. H. Whitehead has a long memorandum of his own opinions on the management of the hospital and sundry recommendations, of which the most important are—(1) the appointment of a resident European sanitary inspector; and (2) the gradual appointment of Chinese medical officers *trained in Western methods of medicine*. (The italics are ours.) All the Commissioners acknowledge that the sanitary state of the hospital has improved since 1894, but very much remains to be done. Let us quote the evidence of the principal medical officer of the Army Medical Staff in the colony, Surgeon-Colonel Evatt, taken on July 2nd, 1896. The exact dates of his visits to the hospital are not given, but as he only arrived in the colony in May they must have been between that time and the date on which he gave his evidence. "The number of commodes was most marked. There was a perfect epidemic of commodes, and there were patients suffering from diarrhœa in the same wards with other patients suffering from open wounds. ..... That day we visited the hospital some of the commodes were in a most dreadful state. The stench was enough to make anybody ill who was well, and it must have been bad for the sick inmates." Now, we consider that, to quote the words of the Hon. C. P. Chater, "such a state of things should not exist in a British colony, and in an institution partly supported by the Government of that colony." The hospital, of course, was built for, and partly by, the Chinese, so it would be ridiculous to try to administer it in a purely Western fashion, for most Western ideas are entirely unfitted for Orientals; but with regard to sanitary matters they concern the health of the whole community and *must* be set right. As regards Chinese methods of treatment and nursing they will have at present to remain as they are until a supply of native medical men are trained in Western medicine, which Orientals can appreciate, as witness the Japanese and some of the races of India. Oriental filth is a matter which, to use a trite journalistic phrase, must be seen to be appreciated, and we can only hope, nay, more, we may say demand, in the name of the medical profession, that the Colonial Government will take steps—if, indeed, it has not already done so—to remedy the grosser evils pointed out in this report.

THE WORK OF THE HOSPITAL SATURDAY FUND.

THE annual meeting of this Fund was held on March 3rd, when the chairman, Mr. Reginald B. D. Acland, delivered an address dealing with the work of 1896. With reference to the question of new premises he pointed out how entirely unsuitable and cramped the present offices of the Fund were, and mentioned that it had been decided to purchase some new premises in the Gray's-inn-road much more convenient than those in Farringdon-road as regards space and less expensive as regards rent. Passing on to details the chairman said that during the year 28,708 letters had been received and dealt with almost without complaint. The actual receipts for the year were £21,614 odd, and the percentage of expenses to receipts was 11·81. The Ambulance Committee, which has only been in existence thirteen months, has done good work and is now working in complete harmony with the St. John Ambulance Association. The Surgical Appliance Committee supplied 2782 appliances, such as spectacles, artificial teeth, legs, and arms, and spinal machines. With regard to cases sent to hospital the Fund is making a praiseworthy effort to sift their applicants before sending them to chest hospitals at least. "In response to applications for such letters 1101 forms of medical certificates were issued ..... of these applications 556 were never heard of again, and of the remainder which were returned only 313 were found suitable for chest hospitals ..... 20 were sent to general hospitals, and 212 to the metropolitan dispensaries." From this it would appear that more than half the applicants refused to submit themselves to a medical examination previously to going to the hospital. The chairman referred to the articles which have recently appeared in our columns upon hospital abuse, and remarked that the writer "seems to mean that a hospital is abused if the result of the patients going to the hospital is that they do not go to the general practitioner." He did not think that as a class the patients who attend our hospitals do so with the idea of avoiding payment to a professional man, but because they think they get better treatment than at home. The question, however, was exceedingly difficult, for there was no body of men who lived more self-sacrificing lives than general practitioners among the poor. We can assure Mr. Acland that there is abuse, and that very real, of the charity dispensed by hospitals, and we are glad to see that he remarked, in the course of his address, that "the time has come when associations like ours should do something to try and stem this ever-increasing stream of out-patients."

MEDICAL STUDENTS AND VACCINATION.

THE anti-vaccinationists, whatever their demerits, are by no means wanting in energy, and to the vigorous manner in which they appeal to the ignorant electorate must be attributed in no small degree the existence of distorted notions and erroneous ideas. It is obvious that if the mistaken views which so largely prevail are to be replaced by views more in accordance with the truth there is much to be done. The arguments of the opponents of vaccination are not difficult of refutation, but it is nevertheless absolutely essential that they should be carefully studied in order that fallacies, suppressions, and distortions with which they so frequently abound may be laid bare. It is therefore necessary, not only that the public should be educated by means of attractively written pamphlets in forcible and easily understood English, as well as by lectures, but that the medical men of the future should also be put in possession of all the facts, fallacies, and arguments. In this direction Dr. Theodore Acland has done excellent service at St. Thomas's Hospital Medical School. Not only has he given a series of lectures on the alleged injuries from vaccination, on which subject his experience in connexion with the Royal Commission on Vaccination entitles his opinion to be received with great weight, but at a recent meeting of the Medical and Physical Society he delivered an excellent address upon the subject of Compulsory Vaccination, in which he put before the members an eminently unbiased statement of the case, which should serve them in excellent stead in the future combats which are sure to fall to their lot. Dr. Acland had little hesitation in urging that if we wish to reduce small-pox to the smallest limits there is required practically universal vaccination and re-vaccination. Obviously, as we have recently pointed out in our columns, this is the only logical conclusion to be deduced from the report of the Commissioners and that of the dissentients, and it is much to be hoped that the staff at other medical schools will be able to follow Dr. Acland's

example and to put before the students the arguments for and against vaccination. The Epidemiological Society has recently done good work in answering, through the admirable paper of Dr. McVail, the report of the dissentients. It is, we believe, the intention of the society to publish this paper separately from the Transactions[1] and to send a copy of it to every Member of Parliament, together with the resolution recently passed by the society as to the necessity for vaccination and re-vaccination. We certainly trust this will be done, and that the House of Commons may at least have the opportunity of examining into some of the methods of attack and defence of the anti-vaccinationists.

THE HEALTH OF THE TSAR AND THE TSARITSA.

WE are informed upon excellent authority that there is no foundation for the alarming rumours regarding the health of the Emperor of Russia which have been industriously circulated during the last few months. His Majesty does not suffer from any cerebral symptoms, as has been alleged; he is out every morning as soon as it is light, and keeps himself in condition by running a verst (1160 yards, or about five furlongs), watch in hand, to see that he can do it in his average time. One of his amusements is said to be shooting from a bicycle, and he can bring down a crow even when he is going at a good speed. The recent illness of the Empress has also been exaggerated. It was not of the serious nature commonly supposed, but only an ailment incidental to pregnancy, and the accouchement is duly expected in April.

THE UNIVERSITY OF BORDEAUX.

THE inaugural ceremonies connected with the University of Bordeaux were this year celebrated with more than usual pomp and circumstance; but, unfortunately, the students were of opinion that as a body they had not been treated with due consideration in the matter of accommodation, and for a considerable time it seemed as though the orators would not be allowed to proceed with their discourses. At last, during a lull, the rector, M. Couat, began his speech, and being very popular soon commanded the attention of the unruly throng. In 1854 there were only five pupils in the faculties of science and letters, and the treasury of the institution was well-nigh empty; whereas at present, with a reserve of ten million francs, the number of students has risen to 2191, and there are no fewer than 101 professors to attend to their requirements. "As for the output of the University," exclaimed the orator, "I do not wish to weary you by a lengthy enumeration of titles, neither shall I wound individual modesty by quoting names. It is enough if I recall the fact that in all the domains of research, in the sciences both natural and moral, in pure mathematics as well as in philology, the professors of the various faculties of Bordeaux have by their numerous works contributed largely to the advancement of knowledge and to the glory of French literature." While the ceremony inside the building was in progress a very noisy demonstration took place in the street among the shut-out students, the disturbance being fomented by the mounted police, who sought to clear the ground by spurring their horses amidst the crowd. For some time a collision was imminent, but happily a commissary who was endowed with a modicum of sense appeared upon the scene and soon peace was restored. In order to manifest their approval of this gentleman's judicious action the merry students shouldered him in triumph and carried him off, but where they went to the reporter omits to state. So far the events occurred in the daytime, but the same night matters reached a crisis. At a gala performance in the Grand Theatre the students, to their disgust, found themselves "relegated to paradise," and having thus to "roost among the rafters" determined that the audience should be made aware of the fact. It was as though the barnyard denizens of the entire province had found their way into the building, so stupendous was the crowing and cackling. The demonstration, however, was not in reality a spiteful one, and eventually the entire theatrical programme was executed. Meanwhile, the young men who were unable to gain admission even to the "cock-loft" grew more and more excited, and ere long a veritable riot was in progress all round the theatre. The misguided youths strove to make their way in by force, only to be harshly repulsed by the police. Blows with the fist were freely interchanged, and in several instances sticks and bludgeons were used with effect. Eggs of an uncertain age and other similar missiles were not wanting, stones flew about, and the windows of neighbouring cafés were shattered. Finally, the mounted gendarmerie were ordered to charge, and after a brief struggle, during which wounds were liberally inflicted on both sides, the *émeute* ended at one o'clock in the morning. About a dozen of the riotous students spent the remainder of the night in the lock-up, where they were not allowed any food. This, however, was not considered a sufficient punishment, for several of them were condemned to eight days' imprisonment. It is to be hoped that this severe punishment will be a lesson to these Bordelais raiders and that in future if they think they have grievances that demand redress they will confine themselves to strictly constitutional methods.

[1] An abstract of Dr. McVail's paper will be found on page 809.

"BLOOD ERYTHEMA."

MR. MARMADUKE SHEILD[1] proposes this name for a peculiar eruption, not previously described, produced by contact of arterial blood, of which he is himself the subject. On washing away the little crusts of dried blood which remain after operations a faint pink erythematous spot appears in the site of each, which darkens to a faint red, lasts about half an hour, and slowly disappears. The eruption is not attended with itching or inconvenience, and principally occurs on the backs of the forearms and on the forehead. He has also seen it upon the forearms of his assistants, though not so vividly, and twice on the skin round an amputation of the breast. It is remarkable that this peculiar phenomenon, of which surgeons themselves are the subjects, should not have attracted attention hitherto. Mr. Sheild has no doubt of its occurrence, as he has noticed it so frequently, and confirmation of his observations is forthcoming. At a recent meeting of the Dermatological Society of Great Britain and Ireland[2] Dr. Harrison of Clifton stated that having read Mr. Sheild's case he was led to inquire into that of a medical friend, who when sprinkled with arterial blood on any part of the body felt an irritation. After washing away the blood a pink stain remained, which lasted fifteen minutes or longer. Another speaker mentioned the case of a medical man who was neurotic and asthmatical, and to whom the smell of blood was loathsome. After attending a case of post-partum hæmorrhage an erythematous rash was to be seen on the arm, where the blood had been projected, some hours after careful washing. There was also some irritation of the skin. What is the explanation of this curiously produced erythema? Mr. Sheild thinks, as it is not constant, it must depend on some peculiarity of the patient's blood. We cannot agree with this. The peculiarity seems rather to be in the subject of the eruption. All the facts support this view. He does not associate it with any special condition of the patient; and the subject of Dr. Harrison's case distinctly states that any arterial blood would produce

[1] British Journal of Dermatology, November, 1896.
[2] Ibid., January, 1897.

the effect. We consider that it is an example of idiosyncrasy, which accounts for its great rarity. It is perfectly analogous to the eruptions and other symptoms produced in certain individuals by small doses of some common remedy or some ordinary article of diet. There is the difference that the eruption in question is produced by local irritation, and not by internal administration. This is no objection, however, to our view. If considered so it can be met by citing similar cases of eruptions so produced. An ordinary linseed-meal poultice or the application of yelk of egg (Ord) will cause urticaria in some persons. These agents would certainly produce as little effect on ordinary skins as the contact of blood. Again, asthma in some forms is an example of idiosyncrasy; for instance, that produced by the odour of one of the domestic animals. Now it is curious that the subjects of the two latter cases of blood erythema were very susceptible to the odour of blood, and one is described as neurotic and asthmatical. The fascinating and important subject of idiosyncrasy has received but little attention. There is little more than a scanty record of cases, and scarcely an attempt at investigation of the subject as a whole. The phenomena are regarded as inexplicable and as standing quite apart from all others. This attitude is not scientific. Cases of idiosyncrasy, like those of rare diseases, should be regarded, in accordance with Mr. Jonathan Hutchinson, as extreme examples of variations which are but ordinary. Thus the key to explain why that which is harmless to almost all should be toxic to a few is the admitted constant variation in the action of all drugs. We suggest that blood, owing perhaps to the volatile oil which gives the odour, is an irritant too weak to affect an ordinary person. In a small minority some erythema—so trivial and fugitive as to escape observation—may occur, which becomes distinct in a few extreme cases of special susceptibility. Thus far we may theorise on idiosyncrasy. To go further more facts in the form of carefully recorded cases are required. If this view is correct, it will be found that, as in the case of rare diseases, these cases are not so uncommon as we might suppose; and that, in addition to well-marked forms, there is a greater number ill defined which have escaped observation for want of the attention which only follows the discovery of the former.

TINNED SALMON.

OUR contemporary the *Globe* published a letter recently from a correspondent who signs his name and vouches for the following. Last summer he was at a "cannery" at Steveston, on the Frazer River, and "saw fish received from the fishermen, in large and small lots, varying generally from thirty to five fish, and kept piled upon one another just as thrown in from the boats for several days, until something like two or three thousand fish were on hand, before cleaning and canning, so as to save the expense of steam, &c. The thermometer is rarely below 70° and often 90° F. in the shade during the greater part of the canning season, so that you may imagine the condition of the fish first received, which would be underneath the later lots at the time of putting into the cans. The Chinamen who gut the fish use the keenest knives, constantly ground and sharpened, but are often unable to make a clean cut or to prevent the flesh tearing away, owing to its rotten state. But however bad the fish is, it is canned. This is the usual state of things, but I have seen at the busiest times so many as 15,000 or 16,000 fish piled up three or four feet high, and the stench arising abominable." He admits that the fish after being canned are exposed to a high temperature for two hours before the tins are finally sealed, but he also says that previously to being put in the tins they are "cleaned" by being washed in the river, which is a mass of filth from floating offal. Now we have no doubt that the heat of cooking destroys all bacilli, and perhaps also their spores, but putrid fish, even under these conditions, is not a fit food for any human being. Even if micro-organisms and their spores are destroyed there may very probably remain the putrefactive alkaloidal bodies, which act as poisons of the most virulent kind. The writer of the letter is prepared to give the name of the cannery in question, and advises that the output when it arrives, as it is expected to do, at Liverpool, should be seized and destroyed. He also mentions that there were several cases of enteric fever among the employés last summer with at least two deaths. If what the writer says is true steps should be taken to examine the consignment of the factory in question. In the meantime his statements have been categorically contradicted.

THE BENIN MASSACRE.

CAPTAIN BOISRAGON, one of the two white survivors of the Benin massacre, has returned to England, and in the course of a statement (published in the *Times* on the 17th inst.) which he made to Reuter's Liverpool agent thus bears testimony to the heroism of Dr. Elliott, who was killed in the attack: "While we were carrying Major Crawford, Dr. Elliott, who was bleeding from a wound in the head, kept on charging into the bush, trying to prevent the Benin men from shooting at us, for we could only go very slowly. He most undoubtedly kept them from coming close up to us and saved us from being hit several times." Captain Boisragon also acknowledges the services rendered to the survivors by Dr. D'Arcy Irvine when they reached New Benin. We also note in the *Times* of the 16th inst. a Reuter's telegram from Lagos stating that Mr. Allman, Principal Medical Officer H.M.S. Niger Coast Protectorate, is, with the Consul-General, actively engaged in improving the sanitation of Benin city.

A CASE OF EXTENSIVE SKIN-GRAFTING.

AT a recent meeting of the Philadelphia County Medical Society Dr. T. S. K. Morton showed a man, twenty-six years of age, whose left leg had been scalded with boiling water, the consequence being that the entire thickness of the skin sloughed from seven inches above the patella to the malleoli at the ankle, and only a few small islets of skin on the crest of the tibia were preserved. Some eight weeks after the accident Dr. Morton commenced the application of skin-grafts after the manner of Thiersch. The granulations were sterilised as much as possible by spraying with hydrogen dioxide diluted one-half with normal salt solution (0·6 per cent. common salt in water), and were subsequently enveloped in gutta-percha tissue. When suppuration had been largely controlled by this treatment a surface about ten inches long and two inches wide was scraped with a curette. Bleeding was free, but was easily controlled by the binding on of sponges whilst the grafts were being cut. The skin of the opposite thigh having been shaved, sterilised, and oiled, strips were cut from its surface with a razor ground flat on the under side and oiled, the integument being held tense and slightly pushed up by a hand above and one below the place from which the grafts were to be cut; the razor was not permitted to penetrate beneath the papillary layer of the skin. The strips were cut about an inch wide and as long as possible; they very much resembled wet tissue paper, and as they were cut heaped themselves up on the razor-blade. They were then transferred, right side down, directly upon the surface to be grafted, by seizing the end of the strip at the edge of the razor, bringing it to the edge of the wound, and then gently drawing the razor away from this point in the direction of the surface that the graft was meant to cover. No antiseptics were used during the entire process of grafting and dressing; salt solution alone

was used as an irrigant. The grafts slightly overlapped each other in all directions and were covered with strips of Lister protective or gutta-percha tissue; a copious dressing of gauze wet with salt solution was placed outside, a sheet of gutta-percha tissue was wrapped over the whole, and finally a wet gauze bandage was applied with moderate firmness. Before applying the dressing all air-bubbles, blood-clots, or whatever might prevent contact of the grafts with the granulations were squeezed out. The dressing was kept wet with salt solution for forty-eight hours, and the dressing was then renewed, the surface being sprayed gently with hydrogen dioxide in salt solution (half and half), washed off with salt solution, and dressed as at first, save that it was not necessary that the gauze should be kept wet. By this process, repeated some dozen times in the course of a year, a true skin was made to cover the whole area that had sloughed away. It was even moveable freely over the underlying tissues at all points and much elastic tissue developed, so that upon the thigh and calf the skin could be drawn away from the subjacent structures for a distance of an inch. Sensation returned completely throughout the new skin, there was no contraction at the flexure of the knee-joint or elsewhere, and so far as appearances went the leg was in perfect condition. The grafts were taken from the opposite thigh, the thigh upon the injured side above the lesion, and both upper arms. These regions, which yielded successive crops of grafts at intervals of about six weeks, appeared to be in their normal condition save for slight discolourations. The hair was growing over them all as usual, proving that only superficial layers of skin were taken away. The surfaces healed over, as a rule, after taking grafts in about two weeks. These raw surfaces were covered by strips of protective and a dry gauze dressing and bandage. Simple dusting with formaldehyde-gelatin, without other dressing, had also proved satisfactory.

MEDICAL AFFAIRS IN MADAGASCAR.

GENERAL GALLIÉNI, Governor and Commander-in-Chief of the new French colony, has promulgated the following *arrêté*:—"1. No one shall be allowed to engage in the practice of medicine in Madagascar and its dependencies unless he is furnished with a diploma of doctor in medicine of a French faculty. 2. Only natives who have obtained their diplomas in one of the French schools of medicine established in the colony shall be considered as doctors in medicine of a French faculty and authorised to practise in Madagascar. 3. Physicians and surgeons possessing foreign diplomas, no matter what their nationality may be, can only exercise their profession in Madagascar and its dependencies on condition of having obtained, before a French faculty, the diploma of doctor in medicine in conformity with the dispositions specified in Article 5, Chapter iv., of the Law of 30th November, 1892, on the practice of medicine." As a transitory measure medical men possessing foreign qualifications who are at present in practice in Madagascar may obtain authorisation to continue the exercise of their profession provided they make application for it in proper form, and at the same time submit their credentials for examination and verification. In order to afford natives an opportunity of becoming qualified a school of medicine has been opened at Antananarivo under the direction of a military surgeon named Métayer. The selection of a military man for the post has been severely criticised in the Parisian medical press. It is not as though civilian professors were a rarity in France, exclaims one writer indignantly, seeing that they are so numerous they cannot all find employment. It is said to be the wish of the authorities to encourage emigration into Madagascar, but here is an opportunity of introducing emigrants of the very best quality, under whose skilled impulsion the nascent Malgash university could not but speedily attain to the desired standard of perfection. An army surgeon doubtless knows better than his civilian *confrère* how to manage the soldier and keep him up to the mark as a fighting machine, but the professional upbringing of embryonic medical practitioners is another affair altogether, and by no means a military speciality. The pupils being all destined for civil employment it certainly does seem reasonable that their instruction should be entrusted to civilians, but in the present case economy may possibly have something to do with the censured arrangement. The military surgeons must be on the spot in any case, and having as a rule a good deal of leisure the additional occupation thus offered them is no doubt welcome. From another French source we learn that ever since the English Isoavinandriana hospital was requisitioned for the sick and wounded of the army of occupation the want of an establishment where the indigent natives could obtain medical and surgical aid has been grievously felt. In order to fill the void a new hospital has been installed at the expense of the Malgash Prime Minister Rasanjy, who contributes, moreover, the annual sum of £480 towards its maintenance. The balance required, which is estimated at £400 per annum, is to be provided out of colonial resources.

FRESH-WATER BIOLOGY.

THE success and interesting results which have attended the establishment of fresh-water biological stations on the Continent and elsewhere have prompted the question as to why England is behind in this matter. Mr. Scourfield, in a recent number of *Natural Science*, pleads for that impetus to the study of the fauna and flora of English fresh waters which the establishment of stations would give in this country. In a later number of the same journal (March, 1897) Professor Anton Fritsch, Ph.D., of Prague, expresses his pleasure on learning of this proposal, and he records how interesting and various has proved the study of the life groups in more than thirty kinds of Bohemian fresh waters, each with its own special fauna and flora, and comprising springs, mountain brooks, mountain rivers, rivers of the plain, backwaters of large rivers, ponds, lakes, bogs, small pools with *Apus*, snowtarns with *Branchipus*, &c. Each of these kinds of water varies in its own fauna with the seasons of the year and also from year to year, according as rain and sunshine also vary. "Here," remarks Professor Fritsch, "is a work for a century," and we would add that to many it should prove a pleasant and recreative study. The movement is surely a worthy one, and in the interests of science and even national affairs should be supported.

REMUNERATIVE PHILANTHROPY.

WHEN in 1891 Lord Rowton and Mr. (now Sir) Richard Farrant started the common lodging-houses known as Rowton Houses, it was thought doubtful whether such superior accommodation at so low a price could be made to pay; but so successful was the first venture that a company which paid 4 per cent. was soon formed, and with the new capital two more houses were started. The first of these was opened in May of last year and the other is very near completion. The excellence of the accommodation provided has already been referred to in our columns,[1] and we have only to again congratulate Lord Rowton, Sir Richard Farrant, and the company upon the result of their praiseworthy enterprise. The third annual report states that the balance to the credit of the revenue account, after placing £800 to reserve for repairs and renewals, writing off the preliminary expenses amounting to £269 19*s.*, and paying the preference dividends to Dec. 31st, 1896, amounts to

[1] THE LANCET, April 25th, 1893, and March 28th, 1896.

£5017 12*s.*, out of which the directors recommend that a dividend at the rate of 5 per cent. per annum be paid on the ordinary shares for the year ending Dec. 31st, 1896. This will absorb £3625, leaving £1392 12*s.* to be carried forward. Rowton House, Vauxhall (484 cubicles), has been fully occupied throughout the year, and the receipts have been slightly in excess of those of the previous year. Rowton House, King's-cross (678 cubicles), continues to be fully occupied. Rowton House, Newington-butts (800 cubicles), is practically complete and is now being roofed. The operations of the company are, we are glad to hear, to be greatly extended and the capital of the company is to be increased by £100,000.

HORSELESS CARRIAGES IN AMERICA.

To a physician in Youngstown, Ohio, is due the distinction of being the first medical man in the United States to make use of a motor carriage for the purpose of working his practice. Dr. Carlos Booth terms his vehicle a motor cab, has used it for several months, finds it an excellent substitute for one drawn by a horse, and prefers it in most respects to that animal as a motive power. In this carriage Dr. Booth has attained a speed on the level of ten miles per hour, and climbed an incline of from 10 to 15 per cent. grade at the rate of five miles per hour. It seems that motor carriages should prove especially useful to the general practitioner, and particularly to the country one, on whose shoulders the burden of maintaining the two or three horses, with their attendant expenses, necessary for a large and scattered practice falls very heavily. At present the initial cost is large, but, on the other hand, the cost of working horseless carriages is small and the country roads of England, unlike those of America, are peculiarly well adapted to their use. Cripples, paralytics, and those who retain the use of their arms but have no control over their lower limbs should find these vehicles of the greatest service; they would not only be able to travel by means of them without assistance, but also be able to amuse themselves with corresponding benefit to their health.

CONGENITAL SPASTIC RIGIDITY.

CONGENITAL spastic paraplegia was first drawn attention to by von Keine as early as 1840, by Little in his work on "Deformities" in 1853, and by the same writer in the Obstetrical Transactions for 1862, and is sometimes known as "Little's disease," although this term is practically confined to a certain class of cases only—namely, those which occur in children born before full term or at term with the use of instruments. A more recent criticism occurs in an editorial article in the *Medical News* (New York) for Feb. 6th of this year. The symptoms are now generally recognised, the physical condition consisting of diplegia of a spasmodic type, most marked in the lower extremities, where it constitutes a condition of paraplegic contracture, whilst there is also a marked psychical defect, consisting of lack of proper and timely developments of the mental processes, which is very rarely of such a degree as to constitute a mild form of idiocy. Little's disease, however, although dating from birth, is not usually recognised until a number of months later. The pathology and morbid anatomy of the disease are still very obscure. In recent numbers of the *Journal de Neurologie* observations on this subject have been published by van Gehuchten. He points out that congenital spastic rigidity is most common in children born prematurely; it matters very little whether the birth be an easy or a difficult one. At this time of life the pyramidal tracts are almost wholly non-medullated, and therefore devoid of the ability to perform their function. The first tracts to become medullated are those constituting the indirect motor pathway—the pathway through the pons cerebellum; while the direct pathway—the cortical spinal fibres—are very much delayed in acquisition of myelin sheaths and perhaps may never develop them at all. In its downward growth during the later years of infancy the tract of the cortico-spinal fibres reaches first the upper and then the lower levels of the cord, those fibres destined for the lumbar and sacral portions requiring the longest time to reach their destination. The course of symptoms of this disease corresponds with these observations; the rigidity disappears first in the face and head, then in the upper extremities, and remains longest, and perhaps does not disappear at all, in the lower extremities. Van Gehuchten maintains, therefore, that the absence of the myelin sheaths of the cortico spinal fibres constituting the pyramidal tract is attended by the same symptoms as degeneration of these fibres. In both conditions there is an absence of inhibitory action of these fibres upon the motor ganglion cells of the anterior horns, and hence the spasticity. As the author of the article (Dr. Joseph Collins) suggests, these recent writings of van Gehuchten commend themselves to the reader because of the closeness of reasoning contained in them, especially reasoning from analogy on well-founded anatomical facts, and the attention of investigators will be called to the necessity of more accurate and trustworthy observations concerning the genesis and time of occurrence of the disease.

CORONER'S INQUESTS IN LIVERPOOL DURING 1896.

THE total number of cases of death reported to, and investigated by, the city coroner amounted to 1570. In 563 of these cases inquests were deemed unnecessary. Inquests were held in 1007 cases, including 583 males and 424 females. Of these, 106 were legitimate male infants and 101 legitimate female infants, all under one year. Of the illegitimate infants under one year there were 6 males and 11 females. Fifty inquests were held on male children of one year and under seven years. Of children of seven years and under sixteen years there were 28 males and 21 females. Of youths of sixteen years and under twenty-five years there were 24 males and 17 females. In adults of twenty-five years and under sixty years the figures are 306 males and 177 females. Above sixty years of age 63 males and 53 females are accounted for. Post-mortem examinations were made in 147 instances. 189 deaths were due to excessive drinking; of these, 118 were males and 71 females. Sad to say, 185 infants were suffocated whilst in bed with parents or otherwise. Verdicts of "murder," "manslaughter," and "justifiable homicide" were returned in 5, 12, and 1 cases respectively. Verdicts of "accidental death" were recorded in 363 cases; the number of inquests on the bodies of newly born infants was 18. No verdict of "felo de se" is recorded.

DIPHTHERIA AND SCHOOLS.

DR. MEREDITH RICHARDS, the medical officer of health of Chesterfield, furnishes in his annual report for 1896, instances of the manner in which schools may be instrumental in conveying diphtheria, even although the persons attacked may not be at school ages or attending a school which has been recognised as being infected. In the instances brought forward by Dr. Richards evidence is adduced tending to show that the notified cases which were not attending school contracted the disease from school children who apparently for some time past had suffered from slight sore-throat or enlarged cervical glands, and from the throats of whom the bacilli of diphtheria were procured. In the case of one of the schools in question it was ascertained that a teacher had some weeks previously suffered from diphtheria. It is quite clear that in discussing

the effects of school influence in the spread of diphtheria, regard must be had to the indirect as well as to the direct mischief thus caused, and that to assume the absence of diphtheria from a school because no case of the disease has been notified therefrom is an assumption which is not likely to aid epidemiological research. Notification is obviously a most useful agency for the control of infectious disease, but it involves so many uncertain factors that it only furnishes partial information, and those who proceed to investigate outbreaks of disease having regard only to recognised and notified cases are liable to obtain fallacious results. No one would go so far as to assert or to assume as a basis for investigation that schools are always in actual operation for harm, but at the same time no epidemiologist would, it is to be hoped, deny that at times when diphtheria possesses a high degree of infectivity schools present favourable opportunities for the dissemination of the disease.

THE PREVENTION OF TUBERCULOSIS.

THE present time is eminently suitable for the discussion of this subject, inasmuch as the Royal Commission which is now sitting cannot but derive assistance from papers and debates calculated to thrash out the relative importance of the several preventive measures intended to diminish the prevalence of this disease, which enacts such a heavy death toll every year. Dr. Niven's name is intimately associated with this subject, and although the position which he has taken up is perhaps regarded by many as somewhat a counsel of perfection, nevertheless all students of public health have great respect for his opinions and will be very glad to hear the arguments which he will bring forward to-night (Friday) at the Epidemiological Society. The subject is one of great national, and even international importance, and it affects not only medical officers of health, but also every medical man throughout the country. If the notification of tuberculosis were made compulsory the relations of every medical practitioner with his patients would be affected; and it is to be hoped that the debate will be well attended by those who are familiar with the pathology of the disease as it manifests itself amongst our infantile population as well as in adults. We hear that Dr. Payne and Dr. Sidney Martin are expected to join in the discussion.

A DISTINCTIVE SIGN FOR RUSSIAN MEDICAL PRACTITIONERS.

THE Medical Council of the Ministry of Internal Affairs, the highest authority on all medical matters in Russia, has recently decided to introduce a small *znak*, or sign, to be worn on the breast by all medical men, as a sort of insignia of their profession. The idea is not a new one. For many years past all Russian medical men with the degree of Doctor of Medicine have worn, or at least had the right to wear, a little silver sign of this sort. It is of oval shape, about one and a half inches long and one inch broad, and bears a raised design of two intertwined serpents. Under the new regulation—which is not yet law, but will probably very soon become so—this same *znak* will be worn by all qualified practitioners, whether they have the higher degree of M.D. or only the lower qualification of *lékar*. The question was discussed whether some new decoration of special design should not be instituted for those who have taken their doctorate; but this was decided in the negative for the present, so that for the immediate future all Russian medical men, without distinction of degree, will wear the same sign. The object in introducing the sign appears to have been the hope that some distinction of this sort would increase the safety of the wearer in the less civilised parts of the country. Medical men, it was argued, in dealing with epidemics have frequently to take very decisive action on the frontiers and among the uneducated peasantry, and often run great personal risks if the opposition of the people is aroused. The cholera riots of a few years ago, in which many medical men lost their lives, were eloquent proofs of the dangers which medical men often have to face. The sign on the breast will, it is thought, be a certain protection, particularly for civilian practitioners, who have no uniform to show their official position. It will show that the wearer is a servant of the Tsar, and in this way will, it is hoped, command the respect of the people and enable medical men to carry out sanitary and hygienic measures without opposition.

THE CLINICAL RESEARCH ASSOCIATION.

WE have received an advance copy of the annual report of the Clinical Research Association, a body which has only been in existence for a little over two years and has a membership of more than 2400. During the last twelve months 7227 specimens were submitted for examination, of which 1710 were chemical, 3804 bacteriological, and 1532 histological. These figures represent an enormous amount of work, the value of which as a means of establishing diagnosis and so of facilitating treatment cannot be too highly estimated. A new department has been opened for medical photography, including x ray work, and a portable sterile swab for obtaining and transmitting material from the throats of patients suspected of suffering from diphtheria has been devised and is supplied gratuitously on application.

LUNACY IN SYRIA.

MR THEOPHILUS WALDMEIER, a veteran missionary in the East and formerly one of the Abyssinian captives under King Theodore, has taken up the cause of the insane in Syria and Palestine. At present there is no provision in these provinces of the Turkish Empire for the care of lunatics, beyond the convents, to which they are often taken in order that the monks may exorcise the evil spirits by which they are supposed to be possessed. Torture and even death result from the inhuman treatment practised, whilst demented persons often wander at large in the country, like the demoniac in the tombs, untended and ill-used. Mr. Waldmeier, after long study of their condition, has originated a proposal for an asylum to contain 80 or 100 lunatics, which is to be built on the most approved cottage system at the foot of Mount Lebanon, near to the large town of Beyrout. The leading practitioners at this town, American, British, and native Syrian, have given the scheme enthusiastic support and formed an executive committee to promote it. A committee has also been formed in London, consisting of Dr. Percy Smith of Bethlem Royal Hospital, Dr. R. Jones and Dr. F. R. P. Taylor of Claybury Asylum, and Dr. Whitcombe of Birmingham, besides others interested in missionary work abroad — Dr. Gilbart-Smith, Dr. John Dixon, and Dr. Hingston Fox—and several well-known lay members. A meeting was held at the Bethlem Royal Hospital on March 11th. Plans of the proposed buildings were produced, which had been approved by Dr. Clouston of Edinburgh, Dr. Yellowlees of Glasgow, and Dr. Bedford Pierce of York, all of whom have taken the warmest practical interest in the undertaking. Mr. and Mrs. Waldmeier have visited many of the best asylums in Great Britain as well as in Switzerland and Germany in order to become acquainted with the best methods, both of construction and organisation. They will take back with them a specially qualified British physician to have medical charge of the asylum. Sir Richard Tangye, who is treasurer to the fund, reported that nearly £3000 of the total of £10,000 required had

been contributed or promised. The work will be a pioneer one in Syria, and the new asylum or home will form an object lesson to the country and a token of advancing civilisation, and will, it is hoped, lead to a kinder and more humane treatment of the sick in mind throughout the Orient.

HEALTH OF THE GOLD COAST.

AT a time when considerable public attention is being directed to the West Coast of Africa, owing to the return of punitive expeditions from the interior and the establishment of gold-mining companies on the coast, it is useful to acquire all available information dealing with the climatic conditions of the country. In the last Colonial Report from the Gold Coast it is stated that 'the general health of the colony was extremely bad, the endemic fever assuming a pseudo-epidemic form of a malignant type, closely approaching in its clinical manifestations the yellow fever of the West Indies. The death-rate among Europeans was very high, and the excitement induced thereby amounted at one time almost to a panic and served to intensify the fatal tendencies of the prevailing fever. To insanitary causes, aggravated by the excessive humidity of the atmosphere, high shade temperature and practically no rainfall intensifying the action of pathogenic organisms of every kind and especially the endemic malarial poison, must be attributed the malignant type of the fever."

CONGENITAL DEFECT IN THE PECTORAL MUSCLES WITH WEBBED FINGERS.

IN the last number of the *Neurologisches Centralblatt* a short abstract appears of a paper in Virchow's *Archiv* by Professor Hoffmann of Heidelberg concerning a very interesting condition of congenital defect. The patient was a man aged forty-seven years, in whom the sternal part of the right pectoralis major was entirely absent, the clavicular portion of the muscle as well as the pectoralis minor being well developed. The whole of the right upper extremity was shorter and of smaller diameter than the left. The fingers of the right hand had assumed the claw position and some of the joints were ankylosed. Between the right index and middle fingers, as well as between the latter and the ring finger, there was a web which reached to the middle of the first phalanx, while between the ring and the little fingers the web extended between even the first phalanges. There was no sensory impairment, and in spite of the atrophy the right arm was as strong as the left. Professor Hoffmann has collected from medical literature no less than ten cases of defect in the pectoral muscles with webbing of fingers on the same side. In the majority the defect was found in males and affected the right side. The deformity is no doubt the result of a defect in development.

THE ANTI-QUACKERY LEAGUE.

WE have received a circular issued by the above league, giving an account of its aims and objects, which are the "exposure and repression of quackery." The league intends to arrange for the "distribution of books to public libraries and of leaflets for general and local circulation, showing the gross imposture and the worthless composition of quack medicines, the folly and credulity of people who are duped by false assertions of curative power, and the physical injury and pecuniary loss resulting from the use of these nostrums." The league also intends to supply the book, "Exposures of Quackery," to free libraries throughout the kingdom. We welcome the foundation of this league most heartily, but the Augean stable of quackery needs a very Hercules for its cleansing. Perhaps the best way would be to petition the Legislature to absolutely prohibit the sale of proprietary medicines and make them all patent medicines, so that a description of them could be readily consulted by the public, or, still better, a full description of the composition should be printed in large letters upon every bottle or packet containing the nostrum. No one should be allowed to manufacture quack medicines of any description without paying a heavy licence, and the various scoundrels who batten on the public and masquerade under the title of "Reverend" should be imprisoned for fraud, especially that pestilent section of them which professes to cure "self abuse." Any newspaper which inserts advertisements of these remedies should be compelled to hand over any profits over and above expenses to an asylum for idiots, and anyone who sends filthy pamphlets through the post which are dropped into letter-boxes should upon conviction be imprisoned and his whole stock confiscated. Those desirous of joining the league are requested to apply to the Secretary, Anti-quackery League, Savoy House, Strand, London. The minimum subscription is 2*s.* 6*d.* a year.

THE IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION: THE FESTIVAL DINNER.

THE Festival dinner of this association was held at the Café Monico on the evening of St. Patrick's day, the 17th inst., when Professor Alexander Macalister, F.R.S., Professor of Anatomy at Cambridge University, presided over an enthusiastic gathering of upwards of 200, including several ladies. Among the guests were Lord Lister, Sir John Gorst, M.P., Professor Jebb, M.P., and Sir Ambrose Shea, K.C.M.G. The toast of "The Services" was proposed in eloquent terms by Mr. George Stoker, and replied to by Sir James Dick, K.C.B., and Surgeon-Major-General Taylor, C.B. Dr. Cagney proposed "The Guests," to which toast Lord Lister, Sir John Gorst, and Sir Ambrose Shea replied. Professor Clifford Allbutt proposed the toast of "Prosperity to the Irish Medical Schools and Graduates' Association," to which the chairman responded. The speeches were alternated by songs of a national character, and the vocalists were enthusiastically applauded. It was the opinion of all present that a very enjoyable evening had been spent and that hearty thanks were due to Mr. O'Callaghan and Dr. Cagney, the organisers of the meeting.

THE LOCAL OR GENERAL REJECTION OF DISEASED MEAT.

WE are glad to see that the Portsmouth magistrates by a decision given the other day in police-court proceedings do not intend to countenance the idea that if part of a beast is infected with, and rejected on account of, disease other parts may be freely sold and eaten for human food. A butcher was charged with exposing for sale a tongue, heart, two pieces of liver, half a head, and two pieces of suet, all of which were unfit for food. Further, it was alleged he had in preparation for sale two sides and three skirts of beef unfit for food. The inspector said that they were diseased with tuberculosis, and the whole was condemned and destroyed. All the glands were diseased and the deposits could be seen with the naked eye. The defence was based on some parts of the report of the recent Royal Commission, in which it was said to be stated that if meat in which tuberculosis was found was properly treated much of it would be fit for food. It was admitted that this cow was a little "grapy"—which, it was explained, was a butcher's term for this disease—but it was argued that if the "grapy" parts had been removed the flesh would be fit for food, and one witness said he would not be backward in eating it himself. This point the magistrates settled by fining defendant £11 and £1 2*s.* costs. Another point, that the law only allowed an urban sanitary authority to appoint

one sanitary inspector and that the town council had no power to appoint assistants—the inspector in this case was one of the latter—the bench settled on the common-sense argument that with but one officer they did not see how large cities and towns could be adequately protected.

MRS. PEMBERTON, the widow of Mr. Oliver Pemberton, F.R.C.S., the coroner for Birmingham, did not long survive her husband. He died on Sunday, March 7th, and Mrs. Pemberton died on the following Saturday. She was seventy years of age, and the only daughter of Daniel Whittle Harvey, M.P., the first Chief Commissioner of the City of London Police, and a man of considerable political importance. We offer our sincere condolences to the family upon their double bereavement.

THE Queen has granted unto Mr. Harry Maule Crookshank, F.R.C.S. Edin., Her Majesty's Royal licence and authority to accept and wear the Insignia of the Imperial Order of the Osmanieh of the second class, in recognition of his services while actually and entirely employed beyond Her Majesty's Dominions in the Khedive's service as Inspector-General of Egyptian Prisons.

A PUBLIC meeting to promote the National Jenner Memorial will be held in the theatre of the University of London, Burlington House, on Wednesday, March 31st, at 4 P.M. His Grace the Duke of Westminster will preside. Among the speakers will be Lord Herschell, Lord Playfair, Lord Lister, and Professor Michael Foster.

THE Queen has been pleased, on the recommendation of the Secretary for Scotland, to appoint Sir Henry Duncan Littlejohn, LL.D., M.D. Edin., to the Chair of Forensic Medicine in the University of Edinburgh, in the room of Sir Douglas Maclagan, LL.D.Glasg., M.D. Edin., resigned.

THE discussion on Retro-ocular Neuritis begun at the meeting of the Ophthalmological Society on Thursday, the 11th inst., will be continued at an adjourned meeting of the society to be held on Wednesday, March 24th, at 8 30 P.M.

PROFESSOR E. VON BERGMANN, Berlin; Professor Felix Guyon, Paris; Sir W. Hales Hingston, Montreal; and Dr. T. G. Roddick, Montreal, have been elected Honorary Fellows of the Medical Society of London.

MR. WELLINGTON LAKE, medical officer of health of the Guildford and Woking districts of West Surrey, has been appointed deputy-coroner for West Surrey.

BIRMINGHAM GENERAL DISPENSARY. — The annual meeting of the Birmingham General Dispensary was held on Feb. 24th, Alderman G. J. Johnson presiding. The report showed that the total number of patients admitted during the year by ticket was 35,098, an increase of 2324 on the previous year. The total income for the year was £7662. A new branch was opened at Small Heath last year, making the fifth branch which had been added to the parent institution during its hundred years of existence.

ROYAL NATIONAL PENSION FUND FOR NURSES.—The annual meeting of the members of the Royal National Pension Fund for Nurses was held on March 11th at the offices, 28, Finsbury-pavement, E.C., Mr. W. H. Burns, the chairman, presiding. The report showed that over eight hundred nurses had joined the fund during 1896, and the invested funds had risen from £256,600 to £311,200. Sick pay amounting to £1158 had been distributed. The Junius S. Morgan Benevolent Fund had now been brought up to £16,000 by donations received partly from nurses and partly from members of Mr. Morgan's family.

The Lancet Special Commission
ON THE
METROPOLITAN WATER-SUPPLY.

V.[1]
THE SOUTHWARK AND VAUXHALL WATERWORK COMPANY.

History.

FOR a long time the supply of water to the district south of the Thames was even more unsatisfactory than that to the north of the river. The district is a low-lying one, with surface water which is not good, and the inhabitants were, comparatively speaking, poor. In the year 1767 a lease of the fifth arch (from the north and the second from the south) of London Bridge was granted by the Lord Mayor and Corporation of the City, that water-wheels might be put up for the supply of South London, and the work was carried out by the London Bridge Waterworks Company. Southwark was also partly supplied by works from a pond in St. Mary Overie. Neither of these businesses, however, was in a flourishing state at the time of the destruction of London Bridge. They were carried on in rivalry, and pipes from both supplied the same streets. A considerable outlay had been necessary to place the water-supply in an efficient state. A private individual named Edwards bought the Borough works at St. Mary Overie in 1820, and in 1822 he purchased the London Bridge works from the New River Company. He united them in one business, called the Southwark Waterworks, erected steam-engines, and gradually substituted iron pipes for the wooden ones that had been previously used. A change was also made in the method of taking water. Up to that time it had been obtained from a point near the shore; a large iron main was now carried to the middle of the river, and the mouth of the conduit which conveyed it to the wells was covered with a perforated semi-spherical iron cap. The intake was 8 ft. below low-water mark and an iron grating was put at the end of the conduit next the engine well. Before being distributed the water passed through another wire interceptor, but no other method of purification was adopted and there was no reservoir. To obtain the necessary pressure for the delivery of water it was pumped to a cistern which was raised about 60 ft. from the ground and was capable of holding 300 or 400 barrels of water. The engine power was sufficient to raise 4,000,000 gallons a day. The amount of water supplied was only about 1,500,000 gallons and the number of houses supplied was about 7000, and amongst the customers were the great hospitals of the Borough: Guy's and St. Thomas's. The mains extended for a distance of about two miles from the works.

Up to the year 1804 South London was supplied by the Southwark Company, of which an account has just been given, and the Lambeth Company, and the water was sent directly from the Thames to the houses without being kept in a reservoir or undergoing any purification except that of passing through a wire screen. In the year 1805 a number of persons united to form a new company, and an Act of Parliament was obtained in July that year. The amount of money originally raised was insufficient to carry out the work required, and another Act was obtained in 1813 to increase the capital, but the Company had to borrow exchequer bills in 1823. At the early part of its career the Company lost a good deal of money by adopting wooden pipes for the distribution of water, for it was soon found that it was necessary to substitute iron pipes for those which had been put down. The principal station of the Company was near Vauxhall at the south side of Kennington Common. The company was unfortunate also in the selection of their steam-engines. Those first supplied were too small. In 1822 one of 45-horse power was erected and this was capable of pumping the water to a height of 65 ft. above the level of the reservoirs. A little later another engine

[1] Nos. I., II., III., and IV. were published in THE LANCET of Feb. 20th, 27th, and March 6th and 13th, 1897, respectively.

was put up at Cumberland-gardens, near Vauxhall Bridge, to pump the water to Kennington-lane. The water flowed from the river through an iron tunnel 42 in. in diameter. The intake was placed in the stream as far as the third arch of Vauxhall Bridge and at a level of 6 ft. below low water mark. The station at Kennington-common had an area of about five acres and two reservoirs were erected there. Both were lined with bricks and had sloping sides. During spring tides the water flowed from the Thames to the reservoirs and filled them to a level of 6 ft. but they could only be completely filled by pumping. When full one of the reservoirs was capable of holding 2,000,000 gallons of water and the other rather less. A few years later a third reservoir was erected to receive water from the Thames through an iron tunnel 4 ft. in diameter which had already been put down. From the new reservoir water percolated through a filtering bank made of gravel and sand and passed into another reservoir, where it remained for some time before going to the engine well. The second reservoir was several feet lower than the other and was used for keeping the mains full during the night in case of fires. The total capacity of the reservoirs in 1835 amounted to 6,000,000 gallons. The Company were able to supply water to a height of 70 feet above the level of their reservoirs. At this date they supplied about 10,000 houses, and their Act allowed them to supply parts of Lambeth, Newington, Bermondsey, Rotherhithe, Deptford, Camberwell, and Clapham. They were prevented from laying down pipes to any houses within one and a half miles of the Lambeth works. The Lambeth Company, however, were allowed to lay down pipes within 200 yards of the reservoirs of the South London Company. "Thus," as a contemporary writer points out, "restraints were imposed upon one concern and a privilege conferred upon another not in strict accordance with the primary object of legislation, which ought rather to aim at promotion to benefit the security of the community." The restraints to which reference has been made were done away with by an Act passed in 1834. The new Act made it necessary also for both Companies to supply filtered water.

In the year 1845 the Vauxhall Company united with the Southwark and became the Southwark and Vauxhall Water Company. Land was immediately bought at Battersea, so that all the work might be carried on from one station. Water was taken from the Thames at Battersea, subsiding reservoirs and filter beds were constructed, and pumping engines and a stand-pipe were erected. In 1851 it was decided to change the source of the supply from Battersea to Hampton, and an Act was obtained for this purpose in 1852. Reservoirs were made at Hampton, and the necessary plant was put up to pump the water to Battersea. The pumping arrangements at Battersea were altered and new filter beds constructed there. In 1856 additional pumping power was arranged for at Battersea, and in 1862 another engine was put up at Hampton. In 1866 additional works were made at Hampton—a river wall was built, a subsiding reservoir and three filter beds were constructed, and the pumping power was increased. A new main was made to Wandsworth. In 1871 four covered service reservoirs were commenced at Peckham. Of these reservoirs two were 163 feet and the other two 200 feet above ordnance datum. Engines were also erected at Peckham. In 1881 a deep well was commenced at Streatham. In 1884 an arrangement was made for obtaining water from the gravel beds at Hampton. In 1886 additional new engines were put up at Hampton, and an Act was passed to allow the Company to put up a high service reservoir at Forest-hill and for laying a new main between Hampton and Nunhead. In 1891 the pumping station at Wandsworth was erected for the supply of Forest hill and that district.

Present State: General Description.

The Southwark and Vauxhall Company supplies Petersham and a district skirting the south bank of the Thames from Kew to Rotherhithe, including Mortlake, Barnes, Putney, Roehampton, part of Wimbledon, Wandsworth, Battersea, part of Clapham, Lambeth, Kennington, Newington, Walworth, Camberwell, Bermondsey, and part of Dulwich.

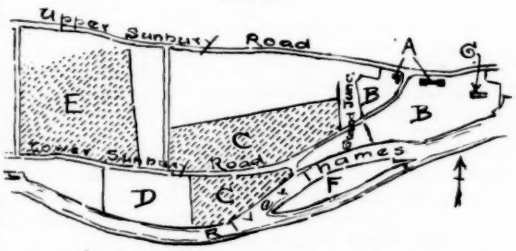
The sources of supply are: (1) the Thames at Hampton; (2) gravel beds near the Thames at Hampton and Platt's Eyot; and (3) a deep well at Streatham.

The stations of the Company, indicated upon the map, are six in number: A. Hampton and Sunbury, Middlesex, and Platt's Eyot, Surrey (Intake, gravel water collecting grounds, reservoir, filter-beds, and pumping station). B. Wandsworth (pumping station). C Battersea (reservoirs, filter-beds, pumping station. D. Streatham (deep well, pumping station). E. Forest-hill (reservoir). F. Nunhead (reservoir, pumping station).

A deep well is being sunk at Merton Abbey and trial boring operations are in progress at Raynes Park. The sites of these operations are marked on the Map G and H respectively.

Hampton.—The station at Hampton is situated between the Upper Sunbury-road and the River Thames, almost entirely in the parish of Hampton; there is, however, a small piece at the east end of the property in the parish of Sunbury, and an island called Platt's Eyot in the River Thames, and this belongs to the county of Surrey. Extensive changes are now being made at this station, and it may be best to give first a general description of what is going on, which will be realised most easily by referring to the accompanying plan (Fig. 1). The parts which are not

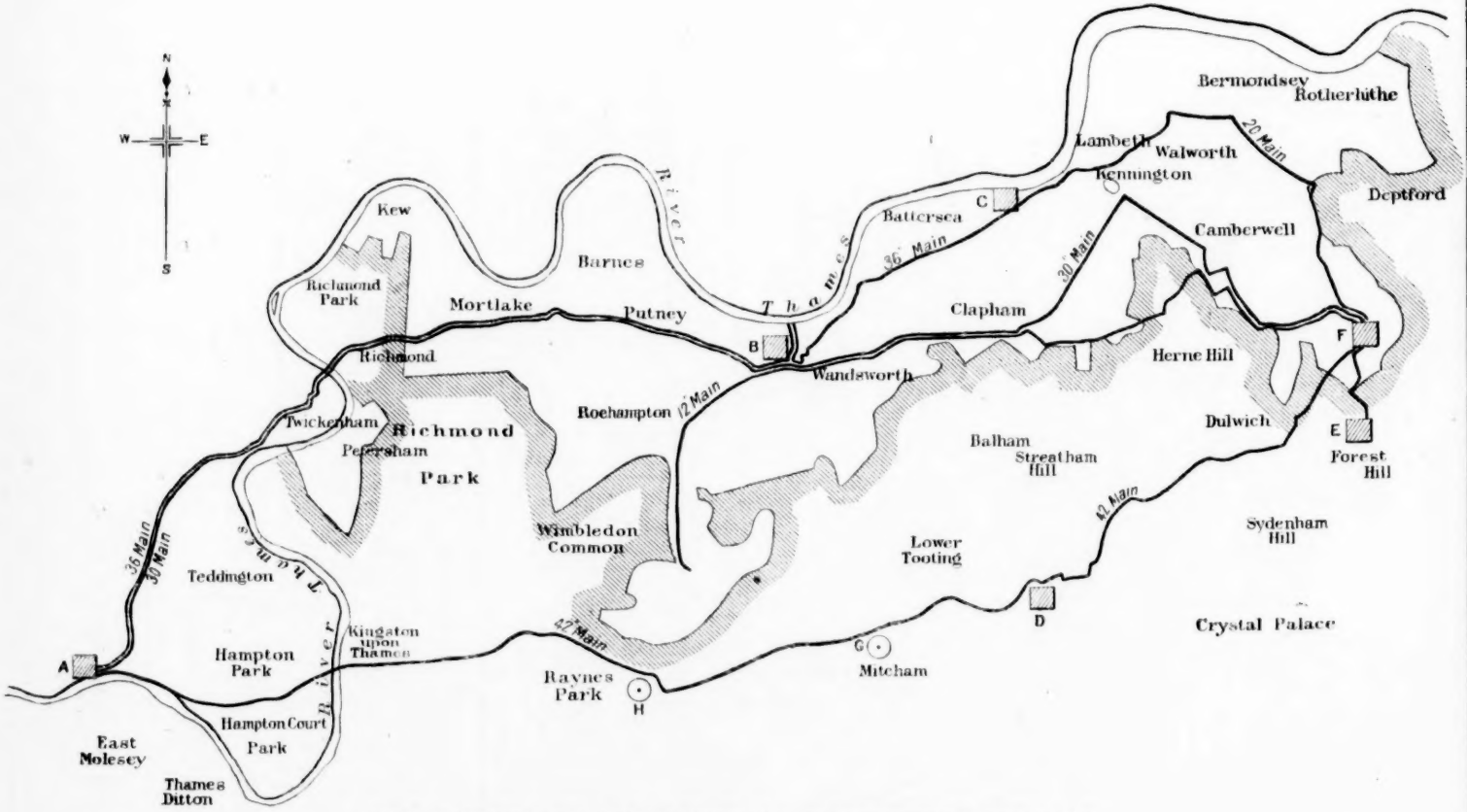
FIG. 1.



General plan of the Company's Station at Hampton, Middlesex. A, G, Engine houses. B, Filter beds. C, Land from which water is collected from the gravel beds. D, E, Reservoirs. F, Platt's Eyot.

undergoing any changes are the engine houses marked AA, and the filter beds marked BB, some of which are situated to the north and some to the south of the Lower Sunbury-road. The land immediately to the west of the existing filter beds belongs to the Grand Junction Company, and on going further in a westerly direction down the Lower Sunbury-road the next part belonging to the company, marked C C, is land from which water is collected from the gravel beds. The system adopted here will be described later. At present it is sufficient to point out that part of this collecting ground is situated to the north and part to the south of the Lower Sunbury-road, and that extensive changes are taking place in both these areas. The part to the north of the road is to be used for new filter beds and a reservoir, the part to the south of the road for filter beds. Going still to the west along the Lower Sunbury-road it is seen that the Company have a reservoir to the south of the road, marked D; and farther on to the north of the road two extensive reservoirs, marked E, are in course of construction. Platt's Eyot, marked F, from which water is collected from the ballast, will not be affected by the changes now in progress. At the extreme east of the Company's property a new engine house is in course of construction, and the site of this is marked G in the plan. The parts of the Hampton station in which work is now being carried on are marked with shading in the diagram, C, C, E, and this brief description and a glance at the map will show that active operations are being carried on at the present time.

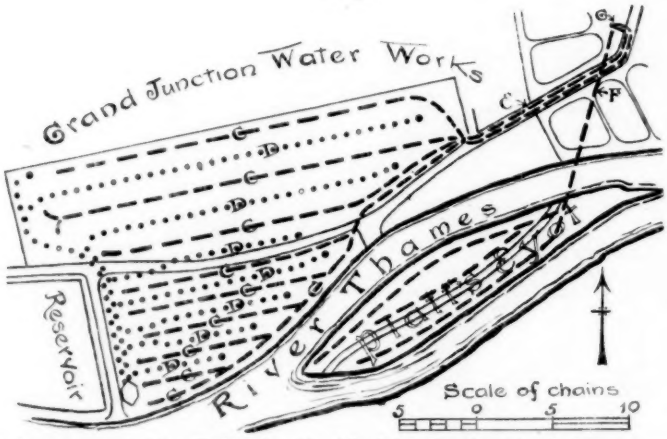
Water from the gravel beds.—The part of the station at Hampton which is devoted to collecting water from the gravel beds occupies two fields, one to the north, and one to the south of the Lower Sunbury-road, and the greater part of Platt's Eyot, (see Fig. 2). The area of the two fields is about thirty-two acres, and that of the island rather over seven acres. Water was formerly admitted from the Thames to the fields through a vertical gravel filter, sections of which are shown in the diagram (see Figs. 3 and 4). The ballast was thus filled with water by means of earthenware pipes which are laid with open joints. The diagram (Fig. 2) shows the way in which these pipes are arranged. Water thus artificially introduced into the gravel bed from the Thames, after passing through about 50 ft. of gravel and sand, is collected by a system of 24-in. pipes, which are laid with open joints at a level of some feet lower than that of the distributing pipes and just on the surface of the



THE SOUTHWARK AND VAUXHALL WATERWORKS COMPANY.

The shaded outline with the lower bank of the river define the area supplied by the Company. The six stations are marked with a shaded square. The construction works for two wells are indicated by small circles drawn round a central dot. A, Hampton and Sunbury (Middlesex) and Platt's Eyot (Surrey) Intake, Reservoir, Filter Beds and Pumping Station. (For details see Figures.) B, Wandsworth Pumping Station. C, Battersea Reservoirs, Filter Beds, and Pumping Station. D, Streatham Deep Well and Pumping Station. E, Forest-hill Reservoir. F, Nunhead Reservoir and Pumping Station. G, Deep Well in course of construction at Merton Abbey. H, Site of Boring Operations at Raynes Park.

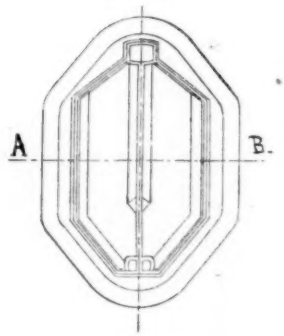
FIG. 2.



Plan showing arrangement of the collecting pipes (C) and the distributing pipes (D) on the Hampton gravel beds.

London clay. The distribution of the collecting pipes is shown in the map. It will be seen that they all converge to one point. Here there is a well. The water is conveyed thence through two 36-in. conduits to an engine house and then pumped up 14 ft. to the filter beds. The accompanying

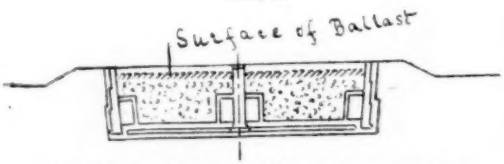
FIG. 3.



Horizontal section of the vertical gravel filter through which water was admitted to charge the ballast in the collecting ground.

diagram shows in vertical section the arrangement of the distributing and collecting pipes (see Fig. 5). The upper pipes, marked D in the drawing, are the distributing pipes; those marked C, which are on the surface of the clay, are the collecting pipes. The arrangements for flooding the ballast are now in course of removal.

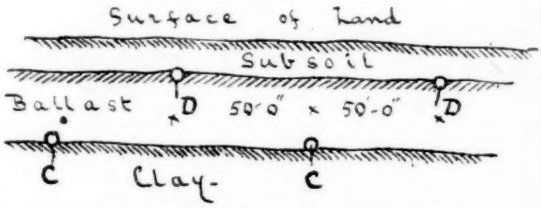
FIG. 4.



Vertical section of vertical gravel filter in the previous figure through A B.

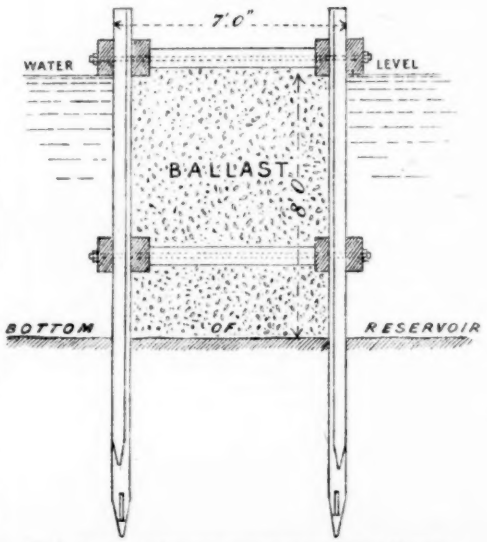
Platt's Eyot.—There is a cutting from near one end of the island to the other, and through this the water from the Thames flows. The flow of the water is regulated by gates situated at each end of the cutting. The island itself is formed chiefly of gravel, and in the gravel beds collecting pipes similar to those which are used on the mainland are placed. These collecting pipes are situated about 9 feet below the ordinary level of the Thames; the river water has therefore to pass through several feet of ballast before it gets

FIG. 5.



Vertical section showing arrangement of distributing pipes (D) and collecting pipes (C) on the Hampton gravel beds.

FIG. 6.



Vertical section of filtering screen formerly used at Hampton.

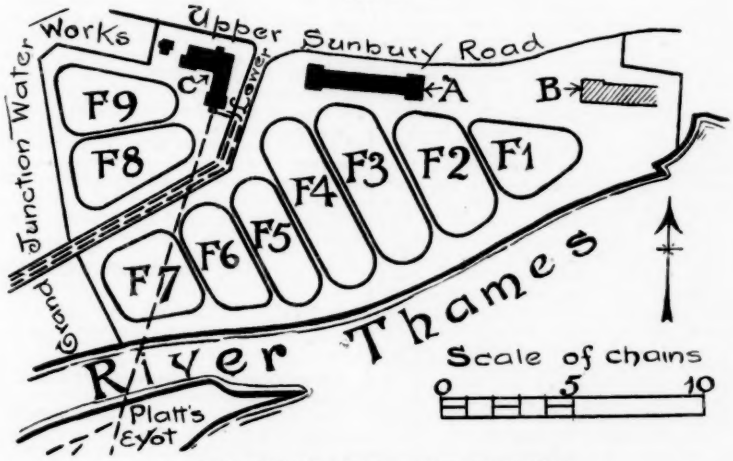
into the collecting pipe. From these pipes water is conducted through a tunnel 5 ft. in diameter which passes under the Thames to the engine well, from which it is pumped to

the filter beds. When the Thames is in high flood, water is not pumped from the island.

Intakes from the Thames.—There are three intakes from the Thames: (1) the new intake, used for the first time last summer to fill the new reservoir; (2) the middle intake; and (3) the old intake, situated near the filter bed marked 7.

At the new intake there are three bays. The water passes through a screen which is formed of ¾ in. bars, and through three sluices into an irregular octagonal reservoir. When visited on Dec. 9th, work was in progress here. A new engine house was completed and one engine was erected, and a second was in process of being erected. The engine

FIG. 7.



Southwark and Vauxhall Company. Hampton Filter Beds.

in working order is a triple-expansion high-speed engine, driving centrifugal pumps, the indicated horse power being 160; the steam is generated by four water-tube high-pressure boilers. The new reservoir, which was first filled during the summer of 1896, has a capacity of 90,000,000 gallons. It is faced with bricks and concrete. When visited on Dec. 9th water from this reservoir was being drawn for the supply of the filters. The Thames was in flood and turbid.

From the second or middle intake the water is conveyed through a 36-in. conduit, and passes through a vertical iron screen similar to that at the new intake. The water is then admitted to the filter beds. At the old intake there are six bays, and the water passes through a screen which is formed of ¾-in. bars, and is then conducted through three 36-in. pipes to the filter beds. A vertical filtering screen (Fig. 6), of which a drawing is given, was formerly in use at Hampton. This system was found to be unsatisfactory, chiefly from the fact that the work of cleaning it involved much trouble, because it entailed moving and replacing the whole of the ballast.

Filter beds.—There are nine filter beds at Hampton. Of these two are to the north and the others to the south-west of the Lower Sunbury-road and close to the Thames. The total area occupied by the filter beds is nine acres. They were not all made at the same date and are not constructed in exactly the same way. Their general form will be seen by looking at the accompanying diagram (Fig. 7). The earliest filters are those numbered 2, 3, 4; these were made in the years 1868–9. The sides of these beds are not vertical, but are arranged at a slope of 1½ : 1. The newer filter beds have almost vertical sides. There is one other point of difference. In the older beds the filtered water channels have central upright ventilators, in the case of the newer beds the ventilation is carried out by means of shafts situated at the sides of the beds. All the filters have central channels for the collection of the filtered water, which passes into them through agricultural tiles. The sand is cleansed by washing under high pressure.

(To be continued.)

ANNUAL REPORT FOR 1895 OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

FIRST NOTICE.

MR. SHIRLEY MURPHY has recently issued his annual report as medical officer of health to the London County Council. The present volume, which relates to the year 1895, makes the fourth of the series that was commenced in 1892; it extends to 134 folio pages, and is arranged on the same general plan as were its three predecessors.

Having regard to the high degree of importance attaching to an authoritative treatise on the public health of the metropolis, we have devoted more than ordinary attention to the volume before us. The work is thoroughly well done and will fully sustain the high reputation of the author. Comparing the present report with the first of the series we are impressed with the amount and elaborateness of statistical detail with which its pages abound, not less than with the evidence it affords of steady improvement in the practical sanitary work achieved by the local boards since the establishment of a coördinating central authority. Like that of its predecessors, the subject matter of the present report is divided into two sections—the first dealing with statistics and the second with sanitary administration.

The London Census which was taken last March showed that the population of the administrative county has not been increasing since 1891 quite so rapidly as it had done between 1881 and 1890. Estimated on the assumption that the rate of increase has been constant since 1891 the population of the administrative county of London in the middle of 1895 is believed to have numbered 4,402,284, or 11,217 less than it would have been had the rate of increase obtaining between 1881 and 1890 prevailed since the latter date. In thirteen of the London sanitary districts there has been a decrease of population since 1891, whilst an increase has taken place in the remaining districts. In only twelve of the latter districts, however, was the increase greater than the excess of births over deaths in the five years 1891–95.

The London death-rate in 1895 is given as 19·9 per 1000, which becomes 21·2 on correction for age and sex constitution of the population. Applying the same principle of correction to the sanitary areas of London it is shown in a useful table that if the death-rate of London as a whole be taken as 1000 the rates of twenty-four of the sanitary districts exceeded that rate whilst the remainder were in defect of it. Comparing the London death-rate at all ages in the five years 1891–5 with that of the previous decade, there was a decrease equal to 3 per cent. among males and 2 per cent.

among females. A table is given showing the fluctuations of mortality in these two periods at the several periods of life. Examination of this table shows that the fall in the death-rate at all ages is mainly due to a decrease at ages under forty-five years, for the death-rate of both males and females above that age has for some reason increased. Pursuing the subject further, Mr. Shirley Murphy shows by another table that within the last five years there has been a mean annual saving of 1304 lives, and that this represents 85,519 years of "life capital" annually saved to the community. The actual gain is therefore greater than would appear from the number of lives saved, and this is evident from the great saving of life at the earlier ages which is shown by the table

Turning now to that portion of the report which deals with the prevalence of common infectious diseases it is at once apparent that by the passing of the Diseases Notification Act the sanitary authorities of the metropolis have acquired more effective powers for grappling with these diseases, especially in relation to the attendance of children at school. Statistics are rapidly accumulating with respect, not to mortality alone, but what is infinitely more important, to sickness also, from these diseases in London, and Mr. Shirley Murphy is to be congratulated on the lucid manner in which he presents these statistics in his successive annual reports. The question of small-pox *mortality* in London during 1895 has been already noticed in connexion with the Registrar-General's annual summary; Mr. Shirley Murphy, however, furnishes particulars of the incidence of *attacks* by this disease in the course of the year. It appears that from the beginning of 1895 to its close not a single week passed in which one or more cases of small-pox did not occur. Towards the end of June the attacks rapidly increased in number, and from that period until the middle of October fears were entertained lest this disease should become epidemic in London. The eastern parts of the metropolis were specially affected, the disease being communicated by tramps, and spreading to neighbouring places from Whitechapel, which suffered more severely than other sanitary areas. In connexion with the subject of small-pox prevalence in London the Medical Officer of Health again draws attention to the large increase in the number of children appearing in the vaccination returns as "not finally accounted for" in recent years. In 1893, the latest year for which returns are available, the proportion so returned was equal to 18·2 per cent. of the total births "The neglect of vaccination in London in recent years," says Mr. Shirley Murphy, "appears to be already manifesting itself by an increase in the proportion which deaths of children from small-pox bear to deaths from this disease at all ages."

The mortality from measles was rather below the decennial average in London as a whole. The eastern districts suffered more severely than the others from this disease, but the highest mortality occurred in St. Luke's sanitary area, the adjoining areas of Holborn and Clerkenwell also suffering severely.

Scarlet fever was somewhat more prevalent in 1895 than it had been in the previous year, although from the case fatality it may be gathered that the type of disease was milder In the present, as also in previous reports, a diagram has been inserted showing the relationship of school attendance to scarlet fever prevalence. The diagram for 1895 shows a marked diminution of scarlet fever incidence in the month of August, which corresponds with the summer holiday. The curve shows a fall in the week immediately following the commencement of the holidays and a rise in the week immediately succeeding their termination. In this respect the statistics of 1895 appear to confirm those of recent previous years as regards the County of London, at any rate. In proportion to population the eastern districts of London suffered more severely than other districts in 1895 in respect both of the number of attacks and of the number of deaths. The outbreak of scarlet fever in Islington in the course of the year was caused by an infected milk-supply, which gave rise to as many as 125 cases in that district alone.

The incidence of diphtheria sickness in the County of London during 1895 corresponded exactly with that of the previous year, but was less than that of 1893. Judged by the "case fatality," however, the type of the disease seems to have been milder in 1895 than in either of the two preceding years. The question of how far this reduction in case fatality may be related to the more frequent use of antitoxic serum in 1895 in the treatment of diphtheria is discussed by Mr. Shirley Murphy in the text, and interesting statistics are given bearing upon this relationship.

As in the case of scarlet fever, a diagram is inserted showing the distribution of diphtheria attacks in the several weeks of the year. From this diagram it appears that there was a considerable diminution in diphtheria prevalence in the holiday month of August corresponding exactly with the diminution in the attacks by scarlet fever. As in some previous years, the diminished prevalence among children under three years of age occurs somewhat later than among children of school age, suggesting, in Mr. Shirley Murphy's opinion, that the decrease among infants resulted from diminished opportunity of infection from older children. The heaviest incidence of this disease was upon the eastern districts of London generally, but the district of Greenwich had the highest case-rate during the year. In proportion to population the incidence of sickness from enteric fever in 1895 did not differ greatly from the average in the previous four years In this year, as in the previous decade, the eastern group of districts had the highest death-rates from enteric fever and the western districts the lowest. An unusually heavy incidence of the disease was experienced at Plumstead, where as many as 215 cases were reported, giving an attack-rate of 3 7 per 1000.

The mortality from phthisis in the administrative county of London was heavier in 1895 than in the preceding year. The rates of mortality from this disease ranged from 1 55 in the western group of sanitary areas to 2 05 in the eastern group and 2 65 in the central. The lowest rates were 0 87 in Lewisham, and the highest 3·28 in St. Saviour's Southwark and 3 31 in St. Giles's.

THE INTERNATIONAL SANITARY CONFERENCE.

FROM Venice, under date March 13th, our Special Correspondent writes:—

The regulations of arrivals from ports on the Persian Gulf engaged the attention of the Conference for several sittings, and the following measures were discussed and approved:—

A ship arriving from one of these ports and certified as infected must immediately disembark its patients, who will at once be isolated. The other passengers will also have to land and subject themselves to surveillance for a period not exceeding ten days. Soiled linen and articles in personal use will be disinfected, as also the ship itself in that part or parts of it deemed necessary by the authorities.

Suspected ships—those, that is to say, which have had cases of the "pestis" on board, but have had no fresh case for twelve days—will undergo a medical visit. The linen, the wearing apparel, and such like which the authorities may pronounce contaminated will be disinfected. The passengers and the crew will be subjected to a ten days' surveillance. The bilge water will be emptied out, the hold and ballast disinfected, and good potable water supplied.

Immunised ships will have free course, provided always that they have completed ten whole days since their departure from the last infected port, otherwise they will have to remain under surveillance until the expiry of this period. All the same, the authorities at the port of arrival will have it in their power to prescribe and enforce the measures adopted for suspected ships. In applying these measures in circumstances as they arise the authorities, however, will have to make allowance for the presence on board of a medical man provided with disinfecting apparatus, since, as already stated, in such cases the measures taken will be less vigorous.

Special measures will be authorised for adoption in regard to certain ships, especially those conveying pilgrims, and, indeed, for all others found in bad hygienic condition. Ships declining to undergo the measures prescribed by the authorities will have it in their power to put back to sea. Their passengers, however, will have the right to demand disembarkation provided that they submit to the measures prescribed by the authorities of the port at which they want to land.

The Conference next resolved upon the construction of two hygienic establishments in the Persian Gulf—one in the district of Ormuz or in the Island of Ormuz, or in that of Kishm; and the other in the neighbourhood of Bassora, at a suitable point to be subsequently agreed upon. Each of these establishments will be fully equipped with a medical staff, with sanitary officers and warders, with disinfecting

apparatus, and with hospitals on a small scale. They will further possess commodious "lazzaretti," while all the ships before entering the Persian Gulf will have to undergo the discipline of the establishment and submit to the regulations prescribed. Such ships, however, as have not been "cleared" from surveillance and which have to re-ascend the Chat-el-Arab, will be authorised to continue their voyage; but only on condition that they take on board the sanitary warders, who will hold them under surveillance as far as Bassora for the second medical visit and for the prescribed disinfections.

Those ships which have to embark goods or passengers at the Persian ports will have to do so at Bender-Bushire, when there has been constructed there a suitable hygienic station. Pending this they will have to do it at Ormuz or at Bassora.

However, such ships as have been immunised for ten days will have in each case free course into all the ports of the Persian Gulf, after their state of immunisation has been officially confirmed.

A NEW AND MODEL CONVALESCENT HOME FOR WORKMEN.

THE Rustington Convalescent Home for Working Men will be inaugurated to-day (Saturday). This in many respects is a model institution. It is situated on the beach, close to Littlehampton, faces the sea, and is well exposed to the sea breezes. Built of red brick with a green slate roof and a copper-covered domed clock-tower, it stands out boldly and has a monumental aspect when viewed from the Littlehampton sea parade. No expense has been spared. The instructions to the architect and builder were to err on the side of extravagance rather than on the side of parsimony. The principle governing the plans executed is that in the long run money will be saved, because the solidity of the materials employed and the soundness of the workmanship will obviate the necessity of constant repairs. Though there are no elaborate art decorations, the excellence of the materials and their æsthetic colours rest and please the eye. For instance, glazed bricks are extensively utilised. These are cream-white and olive-green, while the wood is so hard that no paint is required. There are no less than seventeen rooms which contain but one bed each. Ten rooms contain two beds each, and only two rooms hold four beds. This provision for forty-five patients could be raised to sixty if the rooms now allotted to the servants were utilised for the patients. Every effort will be made to make the patients feel thoroughly at home, instead of being treated as if they were paupers in receipt of charity who have to be kept well in hand by the enforcement of stern discipline. On the contrary, all the attendants have received instructions to treat the patients as if they were guests. The engine-house is to be thrown open to inspection, and every information given that may instruct or interest the inmates of the home. There is no knowing to what extent kindness of this description may awaken a dormant thirst for higher knowledge, and how far, by satisfying the mind and intelligence, a convalescence may be hastened to a happy issue. Thus on the ground-floor there is a large entertainment hall, where lectures and concerts can be given. Then there are a smoking-room and a reading-room, and bagatelle and other games. There is also a "quiet room," where patients may rest undisturbed on sofas, and need not when exhausted go to their bedrooms. The grounds comprise about nine acres, with a sea frontage of 575 feet, and at the back there is a small pinery, where in summer the shade of these fragrant trees can be fully enjoyed. Numerous seats, some in sheltered positions, and an outhouse for smokers afford the means of rest while taking gentle exercise, and this without quitting the premises. In one corner of the building, and communicating with the gardens, there are lavatories and a boot-room, where the patients can put on their slippers before entering the main building.

The home throughout is lighted by electricity and all the services are worked by electric power. A separate building contains the boiler, dynamo, and engines, and everything is in duplicate so that there shall be no breakdown. Above the engines there is a model power laundry with all the most recent machinery. Windows on both sides admit ample ventilation and light, while powerful Boyle extractors will draw the air and damp out through the roof. A screw propeller fan, worked by electricity, supplies hot air to the drying chamber. It is a pity that similar air propellers have not been placed within the home itself. The care taken to ensure ventilation is more elaborate than scientific. The corridors are warmed by hot-water coils, and apertures above the doors enable the warmed air from the corridors to enter the rooms. On the opposite side, by the outer wall, there is at least one Tobin tube and in the large rooms several such tubes. Every room also has an open-grate fireplace, and above the fireplace an opening, protected by mich valves, which serves to extract the foul air. Thus when both windows and doors are shut there still remains ample means of ventilation; but this ventilation must of necessity depend on the force and direction of the wind, on the difference of the in-door and out-door temperature—in a word, on varying climatic conditions. It will, therefore, be too violent at some moments and insufficient at others. This is inevitable in all buildings excepting those that are provided with motive power. With power, however, the supply of air can be regulated with mathematical precision. It then depends on the velocity of the revolving fans, and not on the force of the wind and the fluctuations of the temperature. At the home power is employed to pump the fresh and the salt water into the tanks, to raise the lifts, to work the machinery in the laundry, and even to pump hot air into the drying chamber; but, strange to say, it is not employed for ventilation.

Hot and cold and salt and fresh water baths are provided on every floor. The outer walls are of double thickness with a two-inch vacant space, or "air blanket" between each wall. The window frames have a weather dip of two and a half inches and an oak sill. The urinals have a curled lip all the way down both sides. This is Mr. Bostel's patent, and it prevents splashing and keeps the clothes away. Above there is an automatic flush tank, and below an automatic syphon. The soil pipes have inlet and outlet ventilators protected by charcoal, and there is a very elaborate flushing of the closet pans. The fresh-water supply is derived from an artesian well fifty-five feet deep. This water is softened by Maignen's process and then pumped to the top of the building, where the fresh-water tanks can hold 3000 gallons. Here there is a very ingenious apparatus for automatically setting the electric pump in motion. As the water level in the tanks falls the floater acts upon a brass tube balanced on the wall of the tank loft. When the tube is so pressed down as to reverse the level a steel ball, which is inside and at the other extremity of the tube, runs down, and its weight causes this tubular brass rod to fall with violence, so that it strikes the electric apparatus with sufficient and sudden force to establish the current and set the electric pump in motion. When the tanks are full pressure on the other side of the tube reverses the action, and the tube, swinging back to its original position, stops the pump. Thus, by the automatic see-saw of this brass rod the tanks are re-filled as soon as they become empty. This apparatus is known as Bostel's automatic lever switch, and we had the satisfaction of seeing it work very effectively.

Altogether we were most favourably impressed by our visit to this new convalescent home, and are convinced that its future inmates will greatly benefit from their sojourn in an institution which is so admirably built and situated. The scheme was originated by Mr. Thomas Noblett, who had recognised the great difficulty encountered by workmen and others in gaining admission to convalescent homes. A workman may be ordered to the seaside by his medical attendant, but often he has not the means to pay for lodgings, &c. He may then obtain a list of subscribers to existing homes, and apply vaguely to one and the other. No answers are received, and much time is lost. Mr Noblett therefore helped to organise the North-West London Convalescent Home Fund and placed himself in communication with the clergy, the medical men, the missionaries, and the benefit sick clubs of his district, so that knowledge of deserving cases might be obtained, and the patients sent to convalescent homes without any loss of time. From the very first Mr. Noblett obtained generous support from Mr. Henry Harben of Hampstead, and finally Mr. Harben decided to erect at his own expense the home we have just described. The cost has exceeded £50,000, and to this Mr. Harben will add an endowment of £20,000. This generous initiative will, it is to be hoped, be strengthened by public subscription, a guinea subscription entitling to one letter of recommendation.

Patients, also, unless absolutely destitute, will be expected to pay at least 5s. a week.

MIDWIVES REGISTRATION BILL.

A MEETING in support of the Midwives Registration Bill was held at 73, Chester-square, on March 10th, Lady Balfour of Burleigh, president of the Central Association for Promoting Compulsory Registration of Midwives, being in the chair. Lady Balfour opened the proceedings with a few remarks, after which Mr. Heywood Johnstone, M.P., in the course of a speech said that a committee of the House of Commons took a considerable amount of evidence on this subject in 1892 and 1893, and presented an absolutely unanimous report in favour of a measure of this kind. The present Bill does not prevent anyone resorting to the assistance of a friendly neighbour, no matter how unqualified for the special purpose. What it says is that every person who calls in the aid of a midwife shall have some security, if she wishes, that she is employing one who is competent to undertake the case. It further provides for the creation of a board having a large preponderance of medical practitioners, which board is to draw up certain rules, and among them rules for assigning due limits to the practice of registered midwives; so there is no reason to fear that the practice of medical men will be encroached upon.

Dr. CULLINGWORTH then addressed the meeting, his remarks being substantially as follows:—"An appalling amount of illness is inflicted upon the women of the poorer classes in consequence of the attendance given them during their confinements by ill-trained and ignorant persons who assume the title of midwife. A few evenings ago, when delivering my inaugural address as President of the Obstetrical Society of London, I had occasion to state that although improvements in obstetric science have largely reduced the mortality among parturient women wherever they are applied, yet the general mortality from puerperal fever either remains where it was, as is the case in London, or is actually on the increase, as is the case in the provinces of England and Wales. It prevails most where there is a scattered and mining population, or where, as in the mountainous parts of Wales, the attendance of medical men is rendered extremely difficult, and the care of the mothers is in the hands of untrained midwives. In addition to this mortality there is also a very large amount of disease among women of the working classes wholly due to mismanagement during their confinements. Another very serious matter is that the most usual cause of blindness is infantile ophthalmia, a preventable disease which would not occur in the practice of a conscientious midwife possessed of the most elementary training. The Obstetrical Society of London has long been of opinion that women who call themselves midwives should be required to have some knowledge of the duties which they undertake, and also that a certain amount of supervision should be exercised over them. For many years the society urged upon the Legislature the need for dealing with this question, and in 1872 instituted their examination in midwifery as a temporary expedient until a satisfactory measure should be passed. I was examiner at the Obstetrical Society for some years, and can bear witness that women who have undergone even three months' training have been able to attain that kind of elementary practical knowledge which we consider essential. The clause regarding control is one of the most important in the Bill; it is suggested that in each sanitary district the medical officer of health is the proper person to undertake the duties of local supervision, and in the event of his being unwilling to act the county council may select some other practitioner for the work. I am extremely glad to be here to show that the medical profession is not, as a whole, opposed to this measure. In my opinion, objections to the Bill on the ground of interference with the medical profession are founded upon a fallacy. I have no desire to see my profession suffer, and I honestly believe that this measure will not have such an effect."

Mrs. HEYWOOD JOHNSTONE having read the rules of the West Sussex Association and said that the present meeting was intended to inaugurate that branch, made a short speech in favour of the Bill, after which the proceedings terminated.

THE MEDICAL DEFENCE UNION.

THE annual general meeting of the Medical Defence Union, Limited, was held on Feb. 25th, in the rooms of the Medical Society, 11, Chandos-street, Mr. Victor Horsley, F.R.S., the President, being in the chair.

The report of the council upon the work of the union during 1896 showed some excellent results; not only were the applications made by members for aid, advice, and assistance increased in number, but the value of the union is evidently becoming more understood by the profession generally and more appreciated by the members themselves. The legal work during the past year has been exceedingly heavy and the expenditure has been proportionally higher, notwithstanding the fact that the legal adviser of the union has in many cases succeeded in obtaining payment of the costs from his opponents. In addition to the gratifying amount of success in the law courts, there is good reason for believing that the mere fact of its being known that the union was about to take action greatly facilitated the obtaining of apologies for, and retractations of, various slanders made against individual members. The council is strongly of opinion that nothing short of an amendment to the Medical Act, 1858, making it penal for any person to practise any branch of medicine or surgery for gain without being registered, will succeed in effectually checking unqualified practitioners. When offenders are brought before the law courts it is found that decisions directly opposed to each other are given in cases which appear to be quite similar. In London the council obtained a conviction against an individual who practised under the name of John Ferdinand, M.D. U.S.A., but in another part of the country a prosecution of a like kind was unsuccessful, and on an appeal being made to the High Court the Judges of the appellate Court supported the magistrate who had refused to convict. The council of the union has under its consideration a draft Bill on the subject, and will probably, in conjunction with the British Medical Association, lay it before the Government next year in the hope that it may be adopted as a Government measure. The negotiations for amalgamation with the London and Counties Medical Protection Society were apparently on the point of being brought to a successful termination when they were broken off in consequence of a difference of opinion as to the title of the new association. It is stated that the Medical Defence Union desired to add to its title the words "with which is amalgamated the London and Counties Medical Protection Society, Limited," and that this arrangement was refused by the council of the latter society, who insisted that their proposed name should be adhered to and that the title should be registered.

The council publishes a list of ninety-seven cases, in which with very few exceptions the result of the action taken by the union was highly satisfactory. The solicitor also contributes a supplementary report, in which he mentions that during the year upwards of 150 separate cases had been legally advised upon and conducted by him upon the instructions of the union. On Dec. 31st the union had 3832 names of members on its register, 351 having been added during the year just closed. The offices are at 20, King William-street, Strand, W.C.

THE PLAGUE IN INDIA.

THE reports from India are, on the whole, more hopeful and promising, those from Bombay city showing a decided improvement. The Plague Committee are working systematically and well, and there is on all sides a good deal of energy displayed in dealing with the disease and in the hygienic improvement of matters generally. There is no concealment or official reticence about the work that is being done; on the contrary, everything is open to the inspection of foreign medical missions and visitors from foreign countries. The officials afford any information in their power, and their arrangements can be ascertained by anyone who cares to take the trouble. The total plague returns for Bombay city up to the 11th inst. (according to Reuter's telegraphic agency) amount to 9032 cases and 7546 deaths.

The week's mortality from all causes in Bombay was 1326, as compared with 1484 in the previous week; and the returns for the whole Presidency since the outbreak of the plague up to the 6th inst. amount to 14,856 cases and 12,204 deaths.

The Secretary of State for India has received an official telegram from the Governor of Bombay of a decidedly satisfactory character. The Plague Committee in Bombay, says Lord Sandhurst, are working well and successfully. In spite of the opposition of the natives to the organisation of hospital work, the cases in Bandra, Coorla, and the Thana district have diminished in number. The number of persons who have been inoculated is not precisely known, but it is not less than 2790. The result of Dr. Yersin's treatment is not yet stated.

It will be remembered that many persons were disposed to think that there was some connexion between the outbreak of plague and the storage of grain, and Surgeon-Colonel Waters some time ago gave an interesting account of his researches into the origin of plague, in which he adverted to the rat murrain that had been noticed in several of the outbreaks of bubonic disease and to the plausible hypothesis that the disease might be connected with something affecting the granaries and the storage of the cheaper varieties of grain and millet. Mr. Hankin reports, however, that he has examined a large number of specimens of grain and flour under various conditions, but has been unable to detect the plague microbe in any of them, and that his examination of weevils and of other parasitic insects has also been with negative results. M. Haffkine has been busily occupied in developing a prophylactic and antitoxic serum. It is yet too early to pronounce any opinion on their efficacy, but the antitoxic curative serum has already been tried in many cases of plague in the Arthur-road Infectious Disease Hospital, Bombay, and in the Byculla gaol with, so far, promising results. Dr. Yersin, who was one of the first observers of the plague microbe in China in 1894, and who has worked on the subject in that country and subsequently at the Pasteur Institute in Paris, has prepared a stock of antitoxic serum, and we shall soon know whether the results obtained in India are confirmatory of those which Dr. Yersin and others obtained in China. Dr. Yersin's presence in Bombay is attributable to some extent to Lord Lister's influence and to the highly favourable opinion he had formed of the antitoxin treatment of plague.

CONVESAZIONE AT ST. GEORGE'S HOSPITAL.

A VERY largely attended conversazione organised by the staff of St. George's Hospital was held in the medical school on March 13th. The guests were received by the senior physician (Dr. Cavafy), the senior surgeon (Mr. Pick), and the dean (Dr. Isambard Owen). In the museum and the newly opened laboratories were a number of most interesting exhibits, and in the dean's room a collection of school records, including a number of relics of John Hunter, various letters from him, and his ticket of admission as a student. In the museum there were a number of recently added specimens prepared by the formalin method, described by Kanthack and Shaw at the Pathological Society on Nov. 3rd, 1896, which retained their colour, we had almost said, in a life-like fashion. These specimens were prepared and exhibited by Dr. Cyril Ogle. Dr. Patrick Manson showed a very complete series of slides illustrating the life-history of the malaria parasite, the same slides from which the drawings were taken to illustrate Dr. Manson's Goulstonian Lecture delivered before the Royal College of Physicians of London and published in THE LANCET of March 14th, 21st, and 28th, 1896.

Mr. Clinton Dent showed an interesting collection of skiagraphs in the small lecture theatre, and Mr. Adams Frost gave a lantern demonstration of ophthalmoscopic appearances, while in the large theatre Mr. Gardner gave a demonstration of liquid oxygen, and at another period of the evening, with the assistance of Mr. Cockburn, showed a number of experiments at low temperatures. In the new physiological laboratories Dr. Buckmaster and his assistants were in charge of various physiological and anatomical exhibits. Two specially noteworthy were the circulation of the blood in the yelk sac of the embryo trout, where, owing to the absence of any elastic tissue, the blood circulated in jerks corresponding to every beat of the heart, instead of, as in the frog's web, running regularly, and a micro-spectroscopic demonstration of the power of cilia to reduce hæmoglobin, thus illustrating cell respiration. Among the anatomical specimens were some most exquisite sections of the minute anatomy of the nervous system, especially some preparations of Purkinje's cells. In the bacteriological laboratories Dr. Slater and Dr. Fison showed various methods of bacteriological investigation, together with the methods of serum diagnosis employed by Widal and others. Excellent lantern demonstrations were provided, and the micro-photographic work of Mr. E. J. Spitta was much admired; while in the pathological laboratory Dr. Rolleston exhibited sundry rare pathological conditions illustrated by microscopic sections. Among them were an implantation cyst, sections of a sarcoma before and after the injection of Coley's fluid, and a series of adenomata from various parts of the body.

In the lower physiological laboratory Dr. Buckmaster showed a number of experiments illustrating the fatigue of muscle and nerve. This laboratory is fitted with all the newest appliances, and the recording drums, &c., are driven by a small water motor.

In the department of anatomy Mr. G. R. Turner showed a very beautiful series of specimens illustrating the development of the osseous system in the fœtus, the specimens of the vertebral column being most notable. The house physicians and surgeons were indefatigable in conducting numerous parties of visitors over the new operating theatres, built by Mr. Percy Adams upon the most modern principles, but they were so fully described in our issue of Jan. 23rd last that there is no need to say any more about them here. Along with all these intellectual delights the weaknesses of our nature were provided for by refreshments and tobacco, and entertainment on a higher plane was provided by the Hemming Quartet, who played in the corridor. Mr. Turner and the other demonstrators are entitled to our gratitude for their courtesy and kindness in showing everything there was to be seen and for the trouble they took in explaining the various exhibits.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on March 11th, the President, Sir WILLIAM MACCORMAC, being in the chair.

The Secretary reported the death of Mr. Oliver Pemberton, member of the Council, and a resolution was carried unanimously in which the Council recorded "their deep regret at the death of Mr. Oliver Pemberton, whom they highly esteemed as an able colleague, keenly interested in the welfare of the College and the advancement of surgical science, and in all the relations of life upright, honourable, and true," and expressed "their very sincere sympathy with Mrs. Pemberton and her family in their great affliction."[1]

Mr. William H. Bennett and Mr. W. Johnson Walsham were elected members of the Court of Examiners, and Mr. Davies-Colley was elected a member of the Board of Examiners in Dental Surgery.

The best thanks of the Council were given to Mr. Christopher Heath for his Hunterian Oration, and he was requested to publish it.

A letter was read from Mr. J. H. Targett resigning his appointment as pathological curator. The resignation was accepted, but Mr. Targett was requested to continue his services for the present. It was referred to the museum committee to take steps for the appointment of a successor to Mr. Targett.

A requisition was received, signed by thirty Members of the College, for a meeting of Members to discuss resolutions relating to the following points: (1) the result and validity of the recent poll of the Fellows; (2) a proposal urging the Council to take a similar poll of the Members on the question of the representation of the Members on the Council; (3) the validity of the present mode of appointment of the

[1] We note with very great regret that Mrs. Pemberton herself died two days subsequently.—ED. L.

representative of the College on the General Medical Council; and (4) the refusal of the Council to carry out the by-laws in the case of Mr. R. B. Anderson. The Council resolved that the following reply should be sent: "The Council do not consider it desirable to summon a meeting of the Members for the objects specified in the requisition."

An address of condolence was received from the Obstetrical and Gynæcological Society of Berlin on the death of Sir T. Spencer Wells, Bart., past President of the College. It was resolved that the society should be informed that the Council gratefully appreciated their kind expression of sympathy.

A letter was read from the President of the Royal Society asking whether the College would support the following resolution adopted at a meeting of Presidents of scientific societies in London convened to consider whether any, and if so what, steps should be taken to commemorate the sixtieth year of Her Majesty's reign, viz.:—"That a fund to be called the Victoria Research Fund be established, to be administered by representatives of the various scientific societies, for the encouragement of research in all branches of science." The matter was referred to the President and the Vice-presidents to reply in sympathy with the objects proposed.

The President took the sense of the Council as to the propriety of the College taking some steps to celebrate the sixtieth year of Her Majesty's reign. It was resolved to send an address of congratulation, and it was referred to the President and Vice-presidents to consider and report as to a suitable method of celebrating the event.

A letter was read from Dr. R. R. Rentoul, calling attention to Clause 5 of the Midwives Registration Bill, and pointing out objections to it. A letter was also read from the Midwives Bill Committee, forwarding a copy of the Bill which has been introduced into the House of Commons, and expressing the hope that the Bill will meet with the approval of the College. These letters were acknowledged.

A report was read from Mr. Walter Rivington respecting his action as a representative of the College on the Civil Rights Defence Committee.

A letter was read from the Sanitary Institute inviting the College to send two delegates to the Congress of the Institute, which will be held at Leeds in September next. Mr. Jessop and Mr. Mayo Robson were appointed delegates.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Chesterfield Urban District.—This district possesses a temporary hospital for the isolation of small-pox, but it has as yet no accommodation for ordinary infectious diseases. A site, however, has been procured, and Dr. Meredith Richards advises that one of the hospital committees of the Derbyshire County Council be approached with the view to a sort of joint scheme whereby the interests of the borough and part of the county may be simultaneously served. The Chesterfield Council refuse to supply disinfectants to the public for the purpose of "propitiating the germs" by exposing small quantities about an infected house; this procedure Dr. Richards points out is not of sufficient importance to be carried out at the expense of the town. The infantile mortality of Chesterfield during 1896 was 167 per 1000 births, and with a view of reducing this heavy toll efforts are being made to procure the services of a skilled nurse, who shall visit houses in which births have taken place and offer hints as to the preparation of infant food, &c.

St. Neots Urban and Rural Districts.—Mr. Poyntz Wright is strongly in favour of notification of measles in order that scholars from invaded houses may be excluded from school and, if necessary, the schools closed. In this matter of school closure Mr. Wright observes that although the children cannot be prevented from mixing together out of doors there can be no comparison between the risk of infection out of doors and that incurred in the vitiated atmosphere of a school with infected children therein. Mr. Wright also draws attention to the serious risks which are run by young children who are compelled to attend school in inclement weather, more especially so in rural districts, where long distances have often to be traversed, and where consequently the opportunities of getting wet are very considerable. In the urban district the Notification Act has been adopted, but apparently the council have declined to fix a date when the provisions of the Act are to come into operation. Surely the council should extricate themselves from this ludicrous position. In the report upon the Caxton and Arrington rural district, which is bound up in the same volume as that relative to St. Neots, Mr. Wright records an instance in which six friends dined together at a restaurant in Oxford-street, eating, amongst other things, oysters. A few hours after dinner all six were seized with cramps, vomiting, and purging, and six days later one of the six was notified as suffering from enteric fever. It is stated that the evidence pointed to the oysters as the cause of the mischief, and there is no doubt that many cases of severe gastric disturbances have at times followed the consumption of oysters, especially when such oysters have been procured from sources liable to pollution. As to the source of the enteric fever in the case above referred to, it can only be stated that six days is a somewhat short period for the development, recognition, and notification of this disease.

West Hartlepool Urban District.—Dr. S. Gourley reports in reference to infantile mortality that in cases where the evidence points to improper feeding as the cause of illness much good may be effected by threatening to refuse a certificate if the case should end fatally. He also observes that in West Hartlepool there is a remarkable coincidence to be noted in the association of bad feeding and insured lives, more especially in connexion with such insurance societies as pay more than the amount of the funeral fees and expenses. We read with interest in connexion with the public abattoirs of this district that during 1896 twenty-one beasts were seized and condemned for extensive tuberculosis. Six pigs and two sheep were also condemned as unfit for food. No settlement has, it appears, yet been come to in the matter of compensation for condemned beasts purchased in good faith.

Poole Urban District.—The provisions of the Notification Act in respect to dual notification are still well carried out in Poole, and Dr. Herbert Lawton tells us that during 1896 there were but eight instances in which the householder or nearest relative failed to notify to the medical officer of health. In referring to small-pox and the measures taken to control the disease Dr. Lawton observes, "I at once gave instruction to the public vaccinator to re-vaccinate." Surely Dr. Lawton is here somewhat anticipating the control which sanitary authorities may soon have over the machinery of vaccination.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6679 births and 3919 deaths were registered during the week ending March 13th. The annual rate of mortality in these towns, which had been 19·4 and 18·1 per 1000 in the two preceding weeks, rose again last week to 18·6. In London the rate was 18·4 per 1000, while it averaged 18·8 in the thirty-two provincial towns. The lowest rates in these towns were 12·2 in Newcastle-upon-Tyne, 12·8 in Huddersfield, 13·8 in Burnley, and 15·1 in West Ham; the highest rates were 23·3 in Liverpool, 24·5 in Bristol, 25·2 in Salford, and 25·3 in Bolton. The 3919 deaths included 334 which were referred to the principal zymotic diseases, against 378 and 331 in the two preceding weeks; of these, 83 resulted from whooping-cough, 79 from measles, 72 from diphtheria, 39 from diarrhœa, 38 from scarlet fever, 22 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded in Norwich or in Newcastle-upon-Tyne; in the other towns they caused the lowest death-rates in Brighton, Burnley, and Hull, and the highest rates in Liverpool, Manchester, Salford, and Bolton. The greatest mortality from measles occurred in Cardiff, Manchester, Salford, and Bolton; and from whooping-cough in Swansea, Leicester, Sunderland, Manchester, and Nottingham. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 72 deaths from diphtheria included 53 in London, 4 in Liverpool, and 3 in Birmingham. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three towns. There were 30 small-pox patients under

treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 13th inst., against 34, 43, and 43 at the end of the three preceding weeks; no new case was admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2685, against 2901, 2817, and 2746 on the three preceding Saturdays; 218 new cases were admitted during the week, against 227, 237, and 211 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 368 and 307 in the two preceding weeks, rose again to 344 last week, but were as many as 230 below the corrected average. The causes of 44, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Cardiff, Leicester, Salford, Leeds, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Swansea, Birmingham, Liverpool, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the four preceding weeks from 28·8 to 24·9 per 1000, further fell to 23·1 during the week ending March 13th, but exceeded by 4·5 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·8 in Greenock and 18·2 in Paisley, to 24·6 in Dundee and 25·7 in Glasgow. The 690 deaths in these towns included 29 which were referred to whooping-cough, 27 to measles, 14 to diarrhœa, 5 to scarlet fever, 4 to diphtheria, and 4 to "fever." In all, 83 deaths resulted from these principal zymotic diseases, against 86 and 96 in the two preceding weeks. These 83 deaths were equal to an annual rate of 2·8 per 1000, which was 1·2 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 32 and 36 in the two preceding weeks, declined again to 29 last week, of which 17 were recorded in Glasgow and 12 in Edinburgh. The deaths referred to measles, which had been 30 in each of the two preceding weeks, were 27 last week, of which 19 occurred in Glasgow and 7 in Edinburgh. The 5 fatal cases of scarlet fever corresponded with the number in the preceding week, and included 2 in Edinburgh. The 4 deaths from diphtheria also corresponded with the number in the preceding week, and included 2 in Glasgow, where 3 of the 4 fatal cases of "fever" were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 231 and 203 in the two preceding weeks, further declined to 152 last week, but were 46 above the number in the corresponding period of last year. The causes of 36, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 37·6 and 45·2 per 1000 in the two preceding weeks, declined again to 39·1 during the week ending March 13th. During the past ten weeks of the current quarter the death-rate in the city has averaged 40·7 per 1000, the rate during the same period being 18·6 in London and 22·4 in Edinburgh. The 262 deaths registered in Dublin during the week under notice showed a decline of 41 from the number in the preceding week, and included 61 which were referred to the principal zymotic diseases, against 55 and 79 in the two preceding weeks; of these, 43 resulted from measles, 9 from whooping-cough, 5 from diarrhœa, 2 from scarlet fever, 1 from diphtheria, and 1 from "fever." These 61 deaths were equal to an annual rate of 9·1 per 1000, the zymotic death-rate during the same period being 1·5 in London and 4·3 in Edinburgh. The fatal cases of measles, which had been 34 and 44 in the two preceding weeks, were 43 last week. The deaths referred to whooping-cough, which had been 12 and 21 in the two preceding weeks, declined again to 9 last week. The mortality from scarlet fever and from "fever" was below that recorded in the preceding week. The 262 deaths in Dublin last week included 43 of infants under one year of age, and 55 of persons aged upwards of sixty years; the deaths of infants were below those recorded in any recent week, while the deaths of elderly persons showed an increase. Five inquest cases and 5 deaths from violence were registered; and 70, or more than a fourth, of the deaths occurred in public institutions. The causes of 19, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR COATES embarks for Bombay, Surgeon-Major Boyd is to take Medical Charge of the troops at Armagh, and Surgeon-Major Carmichael proceeds to Cork for duty. Surgeon-Major Westcotte has been ordered to Dublin for duty. Surgeon-Major J. Tidbury has proceeded to the Southern District for duty, and Surgeon-Major Flood to the Belfast District.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain A. J. Heath (Bombay) are placed permanently at the disposal of the Government of Bombay. The services of the under-mentioned officers (Madras) are placed temporarily at the disposal of the Chief Commissioner of the Central Provinces for employment in famine and plague duty:—Surgeon-Lieutenants H. St. J. Fraser, M. Mathew, and F. L. Hammond. Surgeon-Colonel W. P. Warburton, Bengal Establishment, Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, is granted the temporary rank of Surgeon-Major-General whilst officiating as Director-General, Indian Medical Service, and Sanitary Commissioner with the Government of India, during the absence on deputation of Surgeon-Major-General J. Cleghorn. Brigade-Surgeon-Lieutenant-Colonel T. H. Hendley, C.I.E., Indian Medical Service, Bengal Establishment, Residency Surgeon, Jeypore, and Administrative Medical Officer, Rajputana, is granted the temporary rank of Surgeon-Colonel whilst officiating as Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, vice Surgeon-Colonel W. P. Warburton, appointed to officiate as Director-General, Indian Medical Service and Sanitary Commissioner with the Government of India. 2nd Bombay Lancers: Surgeon-Captain Jackson, officiating in Medical Charge, 5th Bombay Infantry, to the Medical Charge, vice Surgeon-Major Lyons, transferred permanently to the Civil Department. 5th Bombay Light Infantry: Surgeon-Lieutenant Kukday to the Officiating Medical Charge, vice Surgeon-Captain Jackson, appointed to the Medical Charge of the 2nd Bombay Lancers. Surgeon-Major Kirkpatrick, A.M.S., on arrival from England, has been posted to the Mhow District, and Surgeon-Major Culling, A.M.S., has been posted to the Bombay District. Brigade-Surgeon-Lieutenant-Colonel Salaman, Bombay Establishment, Superintendent Yerrowda Central Gaol, and Surgeon-Major Donald Frederick Dymott, Madras Establishment, 22nd Regiment of Madras Infantry, retire from the service.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Fleet-Surgeon M. F. Ryan to the *Howe*; Staff-Surgeon C. James to the *Eclipse*. Surgeons: Michael J. Smith to the *Jason*; A. X. Lavertine to the *Theseus*; R. Hardie to the *Eclipse*; C. G. Matthew to Chatham Hospital; and James P. Willis to the *Black Prince*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain A. A. Watson has been appointed Surgeon-Major.

VOLUNTEER CORPS.

Royal Engineers: 2nd Lancashire (The St. Helens): Surgeon-Lieutenant R. Jackson has been appointed Surgeon-Captain.

THE DONGOLA EXPEDITION.

We learn from Lord Cromer's report that the cost of Sir Herbert Kitchener's expedition to Dongola, including the money spent on railway and telegraph construction and on the purchase of gunboats, was £E715,066. His lordship gives a list of the details *seriatim*, but the only items which especially concern medical administration are "Medicines £E2498," and "Hospital rations £E797." The latter sum seems inadequate, but doubtless it was supplemented from other sources. Taking into consideration the magnitude of

the operations, the cholera outbreak, and the unavoidably heavy outlay on transport (coal alone runs away with £E37,895), it is clear, as Lord Cromer says, that a very effective control must have been exercised over the expenditure, more particularly as "there is no reason whatever to suppose that efficiency was in any way sacrificed for the sake of economy." The re-occupation of the province of Dongola has rendered the following additions to the Egyptian Army necessary: Three battalions of infantry, two squadrons of cavalry, a battery of artillery, and two companies of camel corps. This will of course lead to a considerable strengthening of the medical staff under Director General Gallwey, for in addition to military requirements the medical needs of the civil population of the re-conquered territory have to be provided for. The total losses of all kinds incurred by the Egyptian Army during the recent campaign are thus stated by Lord Cromer: Killed in action, 47; wounded, 122; died from cholera, 235; died from other diseases, 126. These figures refer to all ranks. Exclusive of cholera the sick-rate among the Soudanese and Egyptian troops was 3 per cent. In conclusion his lordship observes: "These statistics speak well for the general health of the force during an exceptionally severe summer. There can be no doubt that the Egyptian troops possess great powers of endurance and a remarkable capacity for hard and continuous work."

HEALTH OF THE BRITISH TROOPS IN INDIA.

Writing to the *Times* under date March 16th Colonel W. T. Dooner, replying to Captain Pirie, who suggests that the minimum age at which British soldiers are allowed to be sent to India should be raised by one or two years, says it is an error to suppose that the step suggested could be adopted without great difficulty and expense. Even under existing regulations—the *minimum* official age, as it may be called, being twenty—considerable difficulties frequently arise in finding the men for the necessary drafts. Were Captain Pirie's proposal adopted and the *minimum* age raised to twenty-two almost all men embarking for India would do so with only three years' unexpired colour-service. Instead of having to send out some 13,000 or 14,000 men per annum, we should have to send abroad yearly some 24,000, of course bringing back about a similar number. This would involve largely augmenting our trooping service, and a considerably increased charge to Indian funds and to the Army Estimates would be the result. If, however, our soldiers were treated as reasonable beings, and allowed after three years' service to draw their so-called deferred pay with their ordinary pay, it is possible, and highly probable, that a sufficient number of them would extend their colour-service to nine or ten years. The proposal would then be practicable.

FRENCH NAVAL STATISTICS.

The medical statistics of the French Navy are in future to be furnished according to a new system, which is fully explained in an article occupying the greater part of the *Archives de Médecine Navale et Coloniale* for February. In December, 1894, a new nomenclature of diseases was promulgated by the authorities, in which the various affections and accidents to which seafaring mankind is liable are set forth in seventeen sections under 275 heads. This document is to be strictly adhered to, the results being incorporated annually on a series of forms of which reduced specimens are given by our contemporary. Broadly speaking, the statistics referring to sailors and marines are to be kept separate, and reservists are not to be mixed up with men who are in their first period of service. The medical officer in charge of each unit is to supply information on six different forms, and also to send in a report of medical transactions somewhat similar to that in vogue with us. The information from hospitals is to be conveyed on four forms only, including one devoted to operations. For troops stationed in France the statistics should as far as possible refer to regiments or groups of battalions, but in the colonies it is of more importance to ascertain facts regarding stations.

TREATMENT OF PHLEGMONS.

According to a Russian military surgeon, Dr. Gueorguievsky, it is possible to disperse phlegmons and dry up purulent accumulations by the application of compresses steeped in a 2 per cent. solution of chemically pure bicarbonate of soda. The compresses, covered by some impermeable material, should be retained *in situ* under moderate pressure. The writer maintains that his method is vastly superior to all others, acting both rapidly and unfailingly. It is certainly a simple method enough, and as it cannot well do any harm may perhaps be worth a trial.

The Queen has granted Surgeon-Major Frederick Samuel Heuston, Army Medical Staff, authority to wear the insignia of the Imperial Order of the Double Dragon of the Third Class (third rank) which the Emperor of China has conferred upon him in recognition of his services to the wounded during the late war between China and Japan.

Correspondence.

"Audi alteram partem."

HOSPITAL ABUSE: THE LEEDS WORKPEOPLE'S HOSPITAL FUND.

To the Editors of THE LANCET.

SIRS,—May I be allowed to enter an energetic and emphatic protest against the misinterpretation to which my report on hospital abuse at Leeds has been subjected. An attempt has been made to twist what I wrote so that it should appear as if I thought that the workmen who subscribe to the Leeds Workpeople's Hospital Fund acquired by virtue of these subscriptions a right to be treated at the Leeds Infirmary; and, further, that it would be a good thing if this hospital were converted into a huge provident club. I meant and said nothing of the sort. On the contrary, I said the proposal to convert the infirmary into a provident club would be met "by the immediate resignation of the entire medical staff." Further, I stated that "it is denied that the workmen subscribers to the Workpeople's Hospital Fund have acquired the right to be treated at the infirmary," and this same assertion I repeat on two other occasions but in different phraseology. I quite agree with Dr. Eddison's remark, made at the recent annual meeting of subscribers, &c., of the infirmary, that "working people subscribed for the same reason as other people did—out of the kindness of their hearts and because they wanted to help." Such was the original motive that led to the creation of this fund; such, I hope, is still the motive of the majority of the subscribers. But it was not my mission to advocate any particular course of action or set of principles. I had to collect information without regard as to whether such information was agreeable or disagreeable to any particular party. Now the principal feature that disguished Leeds from the other towns I had visited was the admirable organisation, the power, and wealth of the Workpeople's Hospital Fund, and the fact that dissatisfaction existed which might lead to very serious consequences. One of the principal organisers of this fund met me with the assertion that "we were on the eve of a revolution." Surely it was my duty to describe the causes that gave rise to the existence in high quarters of such apprehensions.

An attempt has been made to deny the accuracy of the description I thus gave, which, it seems to me, tends, on the contrary, to confirm what I wrote. At the annual meeting of the Leeds Infirmary Mr. R. Benson Jowitt, treasurer and chairman of the board, is reported by the *Yorkshire Post* to have said that "he denied entirely that the demands from the Workpeople's Hospital Fund for rights—for value for their payments, for admission into the out-patients' room by virtue of their subscriptions—he denied that such existed except to the most limited extent." I described these demands, and it is now admitted that they do exist, but only "to the most limited extent." It would seem, however, that Mr. Jowitt was not satisfied with this sentence, for he immediately went on to qualify it in such a manner as would convey the impression that the demand was not, after all, so very limited. He said: "It was a danger they had thought of, spoken against, and guarded against from the onset. The meetings in connexion with the fund had *up to the last four or five months* been loyal, generous, and satisfactory, but since then there had been unwise and unguarded statements which had *caused such an article* to be written in THE LANCET which had done an *immense amount of harm*, and had given him and everyone connected with the infirmary a great deal of trouble. None of them desired to have any difficulty or rupture with the Workpeople's Hospital Fund, and yet to some people the

strain was becoming intolerable." The italics are mine; they serve to show that recently there have been difficulties of such a nature as to cause such an article as that which I had written and that the demands, far from being of "a most limited extent," had given rise to an immense amount of harm and produced a strain that was becoming intolerable. I fail to find anything in my report on the subject stronger or even as strong as this. The *Leeds Express* of March 11th, in a leader on Mr. Benson Jowitt's speech, confirms my view, for it holds that "there is no smoke without fire, and THE LANCET Commissioner did not evolve from his own imagination the complaints he set forth. Nor can it be overlooked that two of the Workpeople's Hospital Fund representatives on the infirmary board intimated, in speaking to resolutions adopted yesterday, that members of their fund had expressed dissatisfaction as to certain matters." The same paper adds: "It would be idle to deny, however, that the impression that people well able to pay for proper medical treatment have utilised the resources of the infirmary has caused considerable heartburnings among working-men subscribers. They do not begrudge the sums they contribute—sums which, though small, represent a certain amount of self-sacrifice; nor do they claim special and exceptional privileges. But they resent the idea that people far better able to contribute than themselves enjoy advantages of the institution without cost; while in some cases workmen who subscribe (even on a small scale) have not received quite the consideration or courtesy, as they think, that is desirable."

This is precisely one of the most important points I attempted to bring forward. I was dealing with hospital abuse. If there were no abuse the workmen subscribers would have no excuse for claiming rights. But it is natural that subscribers should complain if they are refused admission to the infirmary, when others who do not subscribe and are as well or better off than themselves are admitted. It is wrong of subscribers to claim the right of admission, but this wrong arises naturally out of another and greater wrong, the toleration of hospital abuse. Then it was also natural that, finding such abuse would not or could not be abolished, the suggestion should have gone forth of converting the infirmary into a provident club. I did not approve of this idea, but I recorded the fact that it existed. It would be a means of equalising conditions and of compelling those who do not subscribe to subscribe. Though there is a great deal to say against such a proposal it does seem to me quite natural that under actual circumstances it should have been made; but again I repeat that I did not mean to support in any way this solution of the difficulty. The *Yorkshire Post*, however, in its leader of March 11th, denies that help has been refused at the infirmary to those who pay in a regular and systematic manner, while it is freely given to those who do not pay at all, and declares that "such a state of affairs does not exist." I was told, on the contrary, that there had been a considerable amount of discussion concerning, for instance, the case of a very active committee-man of the Workpeople's Hospital Fund. In consequence of a fall this person suffered from some internal injury. His club doctor failed to effect a cure, and one day, when this committee-man brought to the hospital a sum of £7 odd which he had collected, he sought to obtain a second opinion from one of the surgeons on the infirmary staff. This advice was refused. Doubtless the refusal was, in one sense, quite justifiable; but the committee-man in question pointed out that many other patients were receiving advice who were in a better position than himself. Why, it was asked, should he pay and collect money for them when he could not get advice for himself. This is the sort of incident which occasions the present trouble, and that trouble is serious and may lead to very far-reaching consequences. Then, again, I am blamed for saying that the workmen "justly maintain that they do not receive from the infirmary anything like an equivalent for what they give to the infirmary." In the previous sentence I had mentioned that the cost of in-patients was £1 1*s.* 8½*d.*, and of out-patients 1*s.* 3½*d.* per week. By this I did not mean that the workmen ought to receive an equivalent, but that their calculation was accurate when they said they said they did not receive an equivalent. Such a consideration is important, because if the present dissatisfaction were to greatly increase it might be financially possible for the workpeople to withdraw their subscriptions from the infirmary and establish a hospital of their own on provident lines. It is in view of this danger—doubtless very small at present, but which may grow—that the need of preventing the hospital abuse which engenders such ideas has become especially urgent. I endeavour to make my reports as free as possible from any sort of advocacy; but if I do advocate anything it is the prevention of hospital abuse. The virulent controversy that my remarks on the Leeds Workpeople's Fund has occasioned suggests that I succeeded in putting my finger on a sore place. The somewhat wild, impassioned, and contradictory manner in which attempts have been made to refute the description I gave of the grievance likewise suggests to my mind that that grievance is more serious and menacing than I had at first supposed.

I am, Sirs, yours faithfully,

March 16th, 1897. YOUR SPECIAL COMMISSIONER.

"THE MEDICAL STAFFS OF HOSPITALS AND HOSPITAL ABUSE."

To the Editors of THE LANCET.

SIRS,—Mr. Burdett's letter in THE LANCET of March 13th calls for a few remarks. First, with respect to a conference, Mr. Burdett is aware that my association proposed to hold one this summer, and that he wrote so strongly on the question that we thought it wise to postpone the question for a time. We are of opinion that the subject of hospital reform should be discussed not only from a *professional*, but from a *lay* point of view. It is perfectly true, as you have stated, that the medical and surgical staffs of hospitals are to a certain extent responsible for the present unsatisfactory condition of the out-patient department, but, on the other hand, the managing committees are surely the proper authorities to take the *initiative* in the work of reform. These committees must be aware of the crowds that attend the out-patient and casualty departments, and they must also be aware that their officials base their appeals to the public on the number of people who are thus attended. It is not improbable that representations on this subject have already been made by some of the staffs to the hospital authorities.

Mr. Burdett will, no doubt, be glad to hear that we are asking the Royal College of Physicians of London to make an investigation into the question. That College would be in a position to speak with *more* authority than any voluntary committee that might be formed in London. There appears to be one error in Mr. Burdett's letter. He states that Sir William Fergusson's committee recommended that medical officers attending the out-patients should be paid. I have carefully looked through the columns of THE LANCET, but I have failed to find this fact recorded. I believe some members of the committee did propose such a recommendation, but it was not agreed to. In conclusion, it will be gratifying to Mr. Burdett to know that we shall shortly publish the report of a sub-committee of our association which was asked to make an inquiry into the working of the special hospitals of the metropolis. As far as regards the general hospitals I believe I am not far wrong when I state that inquiries into the circumstances of patients are made at four only—viz., St. Bartholomew's Hospital, the London Hospital, the Great Northern Hospital, and the Royal Free Hospital, and that the number of *new* patients is limited at two only—viz., St. Thomas's Hospital and St. George's Hospital. St. Mary's Hospital has, as you probably are aware, recently appointed a special medical officer to sift the cases before they are seen by the assistant physicians and surgeons.

I am, Sirs, faithfully yours,

T. GARRETT HORDER,

Honorary Secretary to the Hospital Reform Association.

March 15th, 1897.

To the Editors of THE LANCET.

SIRS,—Mr. Burdett's letter is one of unusual importance to the profession. I venture, therefore, to suggest that every member of the profession should take an early opportunity of coming to your office to sign the petition to the Royal College of Physicians of London at present lying there. As we have no representative body who can undertake the consideration of the matter, the College of Physicians certainly appears to be the body who should undertake the duty of stating the case of the profession upon the matter of hospitals. Mr. Burdett is no doubt to some extent quite correct in attributing the present condition of affairs to the hospital staffs. The College of Physicians has the monopoly of hospital appointments in London upon the medical side,

and it is therefore not unreasonable to expect of that body something in return for that monopoly.

I am, Sirs, your obedient servant,

Hatfield, March 15th, 1897. LOVELL DRAGE.

"THE UNDIMINISHED MORTALITY FROM PUERPERAL FEVER IN ENGLAND AND WALES."

To the Editors of THE LANCET.

SIRS,—Dr. Rentoul endeavours to throw discredit on my statistics. It is one thing, however, to "challenge" statements; it is quite another to disprove them. The only point in his letter which even appears to justify his indictment is where he accuses me of not understanding the figures I am dealing with. If that were so it would, of course, seriously affect the value of my conclusions. But in the instance given it is Dr. Rentoul who has fallen into error. For although it is quite true, as he says, that where the death, from whatever cause, has taken place within a month of delivery the Registrar-General directs that this fact be mentioned in the certificate, it is equally true that in his returns the deaths *directly* connected with childbirth are placed in a separate table. Hence my statement is quite correct—viz., that deaths occurring from causes not directly connected with childbirth are, in the statistics from which I quote, left out of account.

Dr. Rentoul asks for "light" on the number of women who are ill in the hospitals but who do not die. So far as the General Lying-in Hospital is concerned, this information has been furnished in the most ample manner in a paper read before the Obstetrical Society by Dr. Boxall. It is also readily available with regard to all the more important continental lying-in hospitals.

Dr. Rentoul speaks of the statistics of the lying-in hospitals as fallacious, and in support of this allegation he refers to and repeats the statements he made on the subject before the Select Committee on the Registration of Midwives. Those statements have been refuted over and over again. The impression produced by Dr. Rentoul's evidence on the members of the Select Committee can be easily ascertained on reference to the Blue-book. On page 41 of the minutes of evidence it will be seen that towards the close of his long hearing Dr. Rentoul gave an answer that elicited the following remark from his questioner: "This is one of the many statements that you have made in the course of your evidence of a very grave nature which have been entirely unsupported by anything I could call evidence." After this estimate of his statements before the Committee it is surprising that Dr. Rentoul should dare to refer to them again.

Dr. Rentoul scoffs at antiseptics. Any man who can do this (I do not say any man who disbelieves in them, but any man who can scoff at them) in the face of the mass of evidence now available is beyond the reach of argument. There is such a thing as what my friend Sir William Roberts calls reason-blindness. Persons who suffer from this not very uncommon affliction are inaccessible to argument and impervious to the plainest facts. It does not make the least difference to Dr. Rentoul that his statements have been repeatedly disproved. Witness his often refuted blunder about one person in every fifteen dying in their first confinement. Here in his letter of to-day it crops up again, as though the statement had never been denied or even called in question.

I have no hope of being able either to convince Dr. Rentoul or to silence him. The object of my letter is simply to warn such of your readers as are not acquainted with his methods not to be misled by the sophistries with which his letter abounds.

I am, Sirs, yours sincerely,

CHAS. J. CULLINGWORTH.

Manchester-square, W., March 13th, 1897.

"A QUESTION FOR ANÆSTHETISTS."

To the Editors of THE LANCET.

SIRS,—Mr. Clement Lucas's question is one of transparent importance and may present the novelty to some which it appears to do to him. As a matter of fact, the danger of infection, and the manifestly filthy practice of using a blood-stained or vomit-polluted inhaler has appealed to me and, I should say, to all thoughtful anæsthetists for many years. The inhalers in common use—Clover's for ether and various forms of Junker's for chloroform—have been made so as to admit of absolute sterilisation. In the first case the face-piece can be constructed of celluloid or metal, either substance being capable of being made clean, and the more common leather and rubber face-piece is equally cleansable by water and carbolic acid. Mr. Lucas's suggestion with regard to the employment of toughened glass has been anticipated. I recently described such a face-piece, suggested originally by Vajna of Budapest, in the Year-book of Treatment, p. 171,[1] and drew emphatic attention to its value from the point of view of the surgeon who practises aseptic operations. Previously to this Mr. Krohne had made metal frames covered with domett or flannel, which were used with Junker's bottle and bellows. This face-piece can be boiled or baked, and by having two or three a freshly sterilised one can be employed for each case. As, then, the inhaler for ether made at my suggestion by Messrs. Mayer and Meltzer and the chloroform inhalers described above admit of the most rigid sterilisation, it can only be hoped that those who have not already realised the importance of Mr. Lucas's warning will do so and adopt the means already at hand for obviating the dangers which must follow the use of dirty inhalers. I do not suggest that the inhalers I have specified are the only ones which are clean, probably many others exist, nor do I enter upon the question whether or no pulmonary infection can occur from inhaling an anæsthetic from a dirty inhaler. It is sufficient that common sense and accumulated knowledge combine to warn us that danger must follow the use of filthy instruments, whether they be human hands, scalpels, or inhalers for anæsthetics. I may add that the anæsthetist and his clothing are possible sources of infection which should not be overlooked. Those whose lines fall among infectious or septic cases are not ideal anæsthetists from this point of view. Students who anæsthetise under my supervision are compelled to wear a clean linen coat and wash their hands and their apparatus before each case is commenced.—I am, Sirs, your obedient servant,

DUDLEY BUXTON, M.D., B.S Lond., M.R.C.P.,
Anæsthetist, University College Hospital.

Mortimer-street, W., March 17th, 1897.

"THE PROPOSED LEGISLATION FOR HABITUAL DRUNKARDS."

To the Editors of THE LANCET.

SIRS,—The Bill introduced last year into the Reichstag authorising the seclusion of habitual drunkards in separate asylums for drunkards not having yet been passed into law, the Landtag (Provincial Parliament) of Lower Austria, in accordance with a detailed report of Director Tilkowsky setting forth that there were in the five lunatic asylums in Lower Austria 107 suitable patients who might be at once transferred to a separate asylum for drunkards, has resolved in the session just closed to form a department for drunkards in an unoccupied portion of the penitentiary at Kornenburg, this resolution to take effect during the current year. How great a number of habitual drunkards are accommodated in the five lunatic asylums and penitentiary of Lower Austria may be gathered from statistics, which show that during the past ten years 2389 alcoholists have been received into the above-mentioned five lunatic asylums, and that during the last six years 1200 individuals morally ruined by habitual abuse of spirituous liquors have been provided for in the penitentiary at Kornenburg. The Provincial Parliament of Lower Austria, in a note urging the Government to pass the above-mentioned Bill, specially refers to the circumstance that Great Britain is at present occupied with the question of secluding habitual drunkards, and that the English Government, acting on a report of the departmental committee, has decided to extend and amend materially the provisions of the Habitual Drunkards Act. May a satisfactory result soon be arrived at by the English Parliament!

I am, Sirs, yours faithfully,

DR. FR. SCHLANGENHAUSEN.

Villach, Carinthia, March 13th, 1897.

[1] Also see Brit. Med. Jour., October, 1895.

"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—Professor Lankester is not satisfied with the instances I quote, thinking they depend on "the mere statements of patients." In Case No. 1 the son of the injured man was shown to me by the late Professor Rolleston, who had stated the case in his lectures on physiology. One eye was measured and found to be smaller than the other, and the sight of that eye was distinctly defective. As the father, in whom the corresponding eye had been injured, had been a friend of the Professor since childhood, when the injury took place, he had personally verified every particular. The facts are still clear in my memory, and are also fully stated in my notes of his lectures taken at the time. In the other cases I relied entirely on my own observation and the statements of medical men. Dr. Campbell explains such cases as instances of coincidence, and further suggests that the eyes may have been weak and the finger deformed before the accidents. Such, however, was not the case. I see no consistency in forcing the theory of coincidence to account for the inheritance of the results of lesions, while the entail of inherited deformities is admitted as "occurring in the usual way." It would take too much coincidence to explain away Dr. Brown-Séquard's guinea-pigs.

Dr. Campbell quotes the institutions for the blind where the inmates marry without fear. Would it not be more to the point if he produced the results of such marriages? My contention is still unanswered; I believe that there is evidence enough to prove that the results of lesions have been in many cases transmitted; that there is therefore in every case a considerable probability that such results will be transmitted; and further, that a large proportion of the accepted cases of heredity would, if it were possible to trace them, be found to have had their origin as the results of lesions. If that is not so, how does Dr. Campbell account for the origin of hereditary qualities?

In the matter of epilepsy, we find traumatism, syphilis, alcohol, and the thousand other causes producing the disease *de novo* daily. How can we avoid the conclusion that the hereditary cases arose in a similar manner? If they did not, then from what did they arise? Did the Creator plant a few original epileptics fully developed to disseminate the disease? It would be interesting to know if any observations have been made in the matter of the inequalities of limbs in subjects in the dissecting-room. Are these subjects, who come from a class eminently liable to accidents, more frequently asymmetrical than others, and, if so, to what extent? If my theory is correct I should expect a greater percentage of asymmetrical limbs in these subjects, and in any case I shall be glad to hear the evidence of those whose experience enables them to speak with authority. Meantime I submit that the science of heredity is not limited by "what is known and accepted" by Professor Lankester.

I am, Sirs, yours truly,

March 8th, 1897. W. G. THISTLE.

P.S.—The following is an extract from a letter just received from Mr. W. H. Jackson, M.A., F.R.S., Keble College, Oxford. "When Dr. Rolleston was at Pembroke he rowed in their eight. At a training breakfast one man threw half a loaf of bread at another crosswise along the table. The loaf took effect at the side of the temple, on which side I forget. The man who was struck slowly lost the sight of the eye on the side struck. In after life he was ordained and married. He had three or four sons, all of whom had the corresponding eye smaller than the other and with somewhat impaired sight. Rolleston said explicitly that from the inquiries he had made he did not believe there was any previous instance in either father's or mother's family of such a defect. Another of his stories was to the effect that an officer received a sabre wound across the forehead which healed leaving a very bad scar. Many years after he married: his firstborn, a son, showed a distinctly marked line across his forehead corresponding to his father's scar. There is not the least doubt that Rolleston was a firm believer that the effects of injuries are inheritable."

To the Editors of THE LANCET.

SIRS,—The correspondence on this subject which has been going on in the pages of THE LANCET since Jan. 23rd is of much interest to the profession and of importance to a not inconsiderable portion of the general public. I may therefore be permitted—without touching on the vexed question whether there is reason to believe that accidental lesions are transmissible from parent to offspring, and only as one who has had lengthened experience among the epileptic and the insane in some of our great metropolitan institutions—to add a few words to the discussion. It seems to me that in considering a question of the kind above noted an initial difficulty must always, more or less, present itself—that of determining with any degree of certainty from the history of the case and from the information vouchsafed by relatives or friends whether the epilepsy, be it "great" or "small," Jacksonian, or any other of the numerously described epileptic or epileptiform category, is solely and actually of lesion origin in any given case. It would, I think, be rash to accept such an assurance, not unfrequently made, without somewhat close investigation and examination. Every medical practitioner knows the difficulty there is in tracing heredity in disease accurately, even in the ordinary everyday maladies. There exists in the minds of patients and their friends the perhaps pardonable desire to attribute that which is due to undoubted heredity to some accidental cause. This difficulty is intensified a hundredfold when the malady happens to originate in the brain or nervous system. Hereditary tendency in such cases is not usually willingly acknowledged, endeavours to trace it are met by very circumstantial accounts of various injuries, and reasons are given, having the smallest foundation in fact, for the origin of mental defect and of maniacal or melancholic attacks; and perhaps in no form of cerebral disease is more ingenuity displayed than in accounting for the origin of epileptic fits. Injuries to the head or back, falls in infancy, gastric derangements, fear, sunstroke, *et sic de similibus*, play an important part when efforts are made to elucidate "causation" from the friends of the epileptic or insane.

Taking such circumstances into consideration, it would, I think, be unwise to counsel the confirmed epileptic, whatever the reported origin of the malady, to marry and to expect immunity in the offspring. Most of us who have been any length of time engaged among the insane know only too well how epilepsies and insanities are interchangeable and how one or the other may crop up, it may be quite unexpectedly, in different generations of the same family. These remarks apply, of course, only to true, well-recognised, and established epilepsy, with all its well-defined symptoms—a disease, however, which is perhaps more frequently simulated than any other. Some of apparently the most severe and violent cases of epilepsy which I have ever seen were undoubtedly due to hysteria. In one of them especially I remember the simulation was so perfect that I was for a moment deceived, the only fault in the performance being the issue of the scream at a period of the attack when there should have been, as was simulated, complete unconsciousness.

I am, Sirs, yours faithfully,

West Malling, March 6th, 1897. JAMES ADAM.

MECHANICAL IRRITATION OF SPECTACLES A POSSIBLE CAUSE OF FACIAL CONTORTIONS IN CHILDREN.

To the Editors of THE LANCET.

SIRS,—The origin of those facial contortions and spasms which are often seen persisting in some degree throughout life, and are singularly unpleasant to look upon, is often very obscure, and it seems, therefore, worth while to draw attention to anything that may throw light on it in some cases and lead to their being taken in hand before an incurable habit is established. About two years ago my attention was drawn to the spasmodic movements of the facial muscles in a small boy aged six and a half years who had been wearing spectacles for some time. The contortions had been noticed previously, but had got much worse lately, and involved nearly all the facial muscles. He had a marked rheumatic history and a mitral bruit, and at first I thought they were choreic, but a closer examination showed clearly that they were not and, further, that when slight they involved only the muscles at the root of the nose, the frontalis, corrugator supercilii, and pyramidalis nasi, radiating thence to the other muscles. It was also noticed that they were much worse when he wore his spectacles, which he had been ordered to do constantly for myopic astigmatism. No fault could be found with the glasses either optically or

mechanically, but it struck me that possibly the mere mechanical irritation of the frame in a very neurotic child might suffice. I therefore reluctantly ordered the glasses to be given up for a time, as there seemed every chance of an irremediable habit being established. He accordingly dropped their use entirely for some months with the result that the facial contortions ceased entirely except when the spectacles were put on again experimentally. I have just heard that they still return when he wears his glasses (which he does for near work), though not so badly as before. I was able to watch the boy closely myself, and I think there can be no doubt about the sequence of cause and effect in this case; it makes a very awkward dilemma where the defect of vision is a serious one, but a good deal has to be sacrificed to prevent the establishment of a habit which in after years is probably incurable, is very unpleasant to the patient's friends, and annoying to himself.

I am, Sirs, yours faithfully,

E. HOBHOUSE, M.D. Oxon., M.R.C.P. Lond.

Brighton, March 14th.

THE CONSTITUTION OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—Some little time ago the Council of the Royal College of Surgeons of England framed a series of regulations under which meetings of Members might be held at the College. The chief of these regulations are: 1. These meetings will be for consultative purposes only, and can have no official or corporate character or efficacy. 2. Meetings shall be summoned by the Council at such times and for such objects as may by the Council be thought desirable either with or without a requisition from the Members. 3. Such requisition must be signed by at least thirty Members and contain a statement of the objects for which the meeting is requested.

No meeting has hitherto been called under these regulations, but the committee of the Society of Members, in view of the unfavourable circumstances surrounding the recent poll of the Fellows, decided to apply for such a meeting. Accordingly, the following requisition was drawn up and signed by thirty Members:—

"*To the President and Council of the Royal College of Surgeons of England.*

"GENTLEMEN,—We, the undersigned Members of the College, hereby very respectfully request you to call a meeting of Members at an early date, in accordance with your regulations, in order that the Members may have an opportunity of consulting together upon the following matters:—1. The results and validity of the recent poll of the Fellows. 2. A proposal urging the Council to take a similar poll of the Members on the question of representation. 3. The validity of the present mode of appointment of the representative of the College on the General Medical Council. 4. The refusal of the Council to carry out the by-laws of the College in the case of Mr. R. B. Anderson. Motions on these subjects will be submitted on receipt of information that the meeting will be held."

This requisition came before the Council on Thursday last and was refused, the secretary being instructed to state "that the Council does not think it desirable that such a meeting should be held."

Now, Sirs, while I fully admit that the refusal of a meeting is within the discretion of the Council under the above regulations, I venture to think that the Council has made a mistake in so acting on this occasion. If a temperately worded request stating objects which are recognised as reasonable and important by many Members of the College is to be refused simply because the majority of the Council does not agree with these objects, then I submit that the regulations are absurd and had better be rescinded in so far as they relate to meetings called by Members, since they will never be acted upon. Further, the result of this attempt to stifle discussion within the College must certainly be to drive the Members into acts of open hostility without its walls. There are frequent occasions when, in spite of its claim to be "a purely scientific body," the Council is brought into contact with "the State, the profession, and the public." One of these arose two years ago in connexion with the amended by-laws, when the result of the Members' interposition was that the Home Secretary refused to sanction the by-laws in the form desired by the Council. A conflict of opinion has now occurred between the Council and another department of the Government, and if the Members are again found in the enemy's camp is it to be wondered at since they are so persistently turned out of their own? The result in this case will be more serious to the College than in the last, and the Members, who have the welfare of the institution as much at heart as the Council, would be gladly spared any intervention. The obstinate refusal of the Council, backed up by a *minority* of the Fellows, to grant the Members a share in the management of what is by charter their own property leaves the latter, however, no alternative but opposition at any and every opportunity.

I am, Sirs, faithfully yours,

March 15th, 1897. W. G. DICKINSON.

EXCISION OF THE KNEE-JOINT.

To the Editors of THE LANCET.

SIRS,—I have been interested in reading Mr. C. B. Lockwood's paper entitled "A Review of the Operation for Excision of the Knee, together with an Account of a New Procedure—Osteoplastic Excision of the Knee." It is, I believe, quite twenty years since Dr. Fenwick of Montreal was in Liverpool and showed us photographs of a large number of cases in which he had excised the joint, using his curved section of the bone. The results were excellent, and I adopted his method as soon as I obtained a hospital appointment; but very shortly changed it for a wedge-shaped section, which I have carried out for at least fifteen years. The wedge is not cut in the same way or based on the same principles as those advocated by Mr. Lockwood, but attains, I think, at least equally good results. The femur is cut into a wedge by removing slices from the condyles anteriorly and posteriorly, which include the whole of the articular cartilage, but leave the epiphyseal cartilage intact. A corresponding notch in the head of the tibia also removes all the articular cartilage with a very small portion out of the centre of the epiphyseal cartilage. The nature of the wedge of course renders antero-posterior displacement and rotation out of the question, and usually so firmly locks the bones that a special splint is unnecessary. I fail to see the particular importance in retaining the ligaments when the operation temporarily fixes the parts and the subsequent ankylosis renders them unnecessary; but, of course, the retention of the muscular attachments is a different matter, and I agree with Mr. Lockwood that the continuity of the extensor tendon with its insertion through the ligamentum patellæ should be restored as perfectly as possible.

I am, Sirs, yours faithfully,

Liverpool, March 15th, 1897. F. T. PAUL.

"THE ETIOLOGY OF BERI-BERI."

To the Editors of THE LANCET.

SIRS,—I observe in THE LANCET of March 6th a letter from Mr. J. Tertius Clarke with reference to the epidemics of beri-beri in this asylum, suggesting that the outbreaks were due possibly to tin poisoning. I do not see how this could have been the case, as the water-pipes are of iron and the ordinary amalgam used for such purpose throughout the city. Cooking utensils are not tin-lined either, and, generally speaking, this metal is very little used in the institution. It would be of interest to know if Mr. Clarke's patients have been living in the neighbourhood of a tin-producing district.

I am, Sirs, yours truly,

J. O'CONOR DONELAN,

Acting Medical Superintendent, Richmond Asylum.

Dublin, March 11th, 1897.

"A SUCCESSFUL SOCIETY!!"

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET of March 13th dealing with my letter to the Prince of Wales on the subject of vivisection you say that to cut up animals alive without the pretence of anæsthetics in the laboratories attached to the London hospitals would be a wholly illegal proceeding, and you ask why we, who would protect animals from torture, do not attempt to get those who do these illegal acts convicted. My answer is that these acts, unfortunately, are not illegal. You must surely be perfectly well aware that attached to these laboratories are persons holding licences that exempt them from the necessity of using any anæsthetics whatever; and my legal training, to which you are good enough to

allude, does not lead me to blame the anti-vivisection societies for not instituting prosecutions in these circumstances.

You seem to wish people to believe that animals are not cut up alive without anæsthetics in these laboratories, but before you can succeed in this it will be necessary for you to explain why all these vivisectors are at the pains to obtain licences year after year exempting them from the obligation to use anæsthetics. According to the last Home Office report no less than thirty persons on the staffs of the London hospitals held these licences. Perhaps if there were fewer such vivisectors connected with these hospitals there would be more subscribers.

I am, Sirs, your obedient servant,

STEPHEN COLERIDGE.

Egerton Mansions, South Kensington, March 14th, 1897.

*** It has been stated again and again, and is a fact within our own knowledge, that the only experiments performed without anæsthetics are inoculations and hypodermic injections. How can Mr. Coleridge justify the use of the words "cut up alive" as describing such proceedings?—ED. L.

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—As a practitioner of over twenty years' standing I should like to express my approval of Mr. Flemming's letter in THE LANCET of March 6th. Surely there is another view than the selfish dread of the imperilling of our own interests. I have seen a good deal of the work of the women who attend the labours of the poor, and their ignorance of the simplest matters has lost all novelty to me. I have seen a huge abscess produced in the breast of a newborn baby through the midwife's having conscientiously done her duty in "breaking the baby's breast-strings"—a process of kneading and pinching. I have been called to a woman to find that a blue hand had been protruding from her vulva for hours, while the midwife exhorted the bystanders to wait and give nature a chance, until they took matters into their own hands and sent for me. I have been called to find a woman lying dead with the funis pulled away and the placenta still in the uterus, and absolutely within a fortnight to another case where the same midwife had pulled away another funis, and the hæmorrhage was most alarming. In reference to these two cases I asked a magistrate if a warning could not be issued to the woman. His reply showed a callousness worthy of a Turk. "If they will employ such women they must take the consequences." I say they must employ these women, and they must *not* take the consequences. There must be no consequences. No woman should be allowed to attend a case who is capable of pulling away a funis and taking no steps to remedy the disaster. A few months ago I got an urgent message to see a woman. I galloped the three miles to her house and found her dead. The midwife explained that she had bled a good deal, but as she always bled a good deal it had occasioned no alarm. Think of it! The poor creature's life had not only been risked at every confinement, but her convalescence unduly prolonged owing to the exhaustive loss. It is easy to realise the suffering in the case of a labourer's wife, who has to attend soon to her household duties. It is useless to argue that these people should pay a medical man. They cannot do it, and they only deserve credit for not employing him and leaving him unpaid. In this case the midwife was known to me as a favourable specimen of her class—clean, kind, and attentive according to her lights. No inquest was held, as the police informed the coroner that she had done her best. Now, ought any midwife's best to be like that?

I am, Sirs, yours truly.

March 15th, 1897. FOR REGISTRATION.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Corporation Bill: Withdrawal of the Conduit Scheme.

IT is stated that the clause in the Corporation Bill being promoted this session, authorising the construction of a conduit about nine and a half miles in length, to carry the effluent from the sewage works at Davyhulme into the Mersey near Thelwall, has been withdrawn. Strong opposition was given to the scheme at a town's meeting held last week, and on the question being put there was a majority against the retention of the clause. Alderman J. Thompson, chairman of the rivers committee, formally demanded a poll; but at a meeting of the committee which has since been held it was decided to give up the poll and to abandon for the present the attempt to obtain power for the construction of the conduit, though the committee and the surveyor are still said to think that this scheme, estimated to cost over £200,000, will probably prove the best way out of the sewage difficulty. The subject is surrounded with difficulties. The Local Government Board gives no help in surmounting them. It is almost impossible to obtain land for filtration, and its cost is extravagant, while it is said that all chemical methods of dealing with the sewage have failed in producing an effluent satisfactory to the Mersey and Irwell Committee. But the resources of science ought not to be as yet considered exhausted.

Trafford Park.

Trafford Park, which for nearly 900 years has been in the continuous possession of the De Traffords, and has for ages been a health-giving open space, to the incalculable benefit of Manchester and Salford, while they have been growing century after century more dingy, more smoky, and more crowded, is now about to be "developed." In the words of an interviewer, this means "the conversion of the ancient and beautiful demesne of the De Traffords, with its pretty groves, its rich verdure, and its playful deer, into a hive of industry—a place of ironworks, cotton mills, malting houses, and the like. The old baronial hall is to become a grand hotel." Of the 1183 acres of which it consists about 100 acres, skirting the Ship Canal for something like two and a half miles as a strip from 100 to 120 yards wide, will be reserved for dock wharves and terminals for the lines to be connected with the Manchester dock railways. Mr. Marshall Stevens, who has transferred his energies from the Ship Canal to the syndicate and now acts as Mr. Hooley's right-hand man, says that for some "slices" no less than £5000 per acre have been recently bid. What this means from the hygienic standpoint is pretty clear. Much room for fresh air cannot be given at £5000 per acre. Mr. Stevens speaks cheerfully of works for the distillation of tar, for the preparation of a patent fuel (which is to be an important industry), saw mills, flour mills, cotton and seed-crushing mills, oil tanks, malting houses, a ship-building yard, and dry docks. About 750 acres are set apart for these purposes. A central space of about 200 acres is to be reserved as a race-course or public park. The hall and adjoining buildings are to be "converted into a first-class hotel, the gardens and a portion of the park being reserved for golf links and a recreation ground." Railway lines are to bring all the mills and manufactories built into connexion with the Dock Railway and the whole railway system of the country. Having thus provided a delightful fringe of nuisances—for it must be remembered that the Bridgewater Canal skirts a considerable extent of the park and will contribute its quota towards the creation of this earthly paradise—Mr. Stevens says with charming humour: "Doubtless villadom will seize upon certain sections of the estate, for portions of the park rise well above the level meadows; and here you will virtually be able to live in the country and yet be in closest touch with the city." And so the dream in which many indulged of a noble park to be held for ever in trust for the thousands of workers and their children who can rarely or never get beyond the sight of the city chimneys comes to an end. Surely the City Fathers must be conscious of the fatuity and ineptitude which allowed others to forestall them, while they were giving the question of purchase "their best consideration."

March 16th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

"Army Doctors."

PARAGRAPHS have recently appeared under this heading in the *Newcastle Daily Chronicle*, calling attention to the difficulty the authorities are experiencing in filling vacancies in the Army Medical Department, and stating that the difficulty is due to the circumstance that the medical officers

do not enjoy military rank, and are not in the English, as in the Continental armies, addressed as major or colonel, &c., as the case may be, but as "doctor." Possibly this explanation represents the popular view, but surely the position held by Army medical officers ought to depend on the fact that their duties are essential to the welfare of the troops and not on any other consideration.

Death of Mr. W. Boyd, Surgeon, of Durham.

Mr. Boyd has just died at Durham, aged seventy-nine years. He had been elected Mayor of Durham on four occasions, and seven years ago the freedom of the city and his portrait, which now hangs in the town hall, were presented to him. He was the oldest medical practitioner in the city of Durham and was described as the father of the town council.

The Medical Officer of Health for Northumberland.

At the statutory March meeting of the Northumberland County Council it was resolved that Dr. Hembrough, whose term of office as medical officer of health for Northumberland would expire next May, should be appointed permanently.

Durham County Hospital.

By the death of Mrs. Elizabeth Snowball, which occurred last week, the funds of the Durham County Hospital will benefit to the extent of £6000.

March 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Chair of Medical Jurisprudence in the University of Edinburgh.

ON the recommendation of the Secretary for Scotland Sir Henry D. Littlejohn, M.D. Edin., has been appointed to this chair. It has been arranged that in the meanwhile, until time has been given for other arrangements to be made, he will also teach public health. Sir Henry Littlejohn graduated in medicine at the University of Edinburgh in 1847. He has for many years been a lecturer in the extra-mural school of medicine on the subjects he is now called upon to teach within the walls of the University. He is also well known in Scotland as an expert medical jurist. He is a man of much vigour and unusual activity for his years, and has been a popular teacher, a popularity he will doubtless retain in his new position.

Honorary Degrees at the University of Edinburgh.

It is intimated that the University has offered the degree of LL.D. to Professor Sir Douglas Maclagan and Dr. John Wyllie. The former has been referred to here at the time of his retirement from the chair of Medical Jurisprudence. It is generally felt that the tribute to Dr. Wyllie, on his retirement from the staff of the Royal Infirmary, is a very suitable one and fully deserved.

The Edinburgh Royal Medical Society.

The annual dinner of this society was held last week. Professor Burdon Sanderson was the guest of the evening, and in replying to the toast of his health spoke of the advances in medicine since he studied in Edinburgh.

Close of the Winter Session at the University of Edinburgh.

The winter session in the Faculty of Medicine terminates this week.

Glasgow Royal Infirmary.

It is now practically decided that the tribute Glasgow will offer in celebration of the Queen's long reign is to be the extension and improvement of the Royal Infirmary. At a meeting of the citizens on the 12th inst., after a loyal address of congratulation to Her Majesty had been adopted, Sir John Muir moved a resolution in favour of the proposal to raise a sum of money for the purpose of re-constructing the older portion of the Royal Infirmary. This was seconded by the Lord Dean of Guild and supported by the Rev. Dr. Marshall Lang. Thereafter, on the question being thrown open to discussion, though the general voice was in favour of the proposal as submitted, there were not wanting supporters of the alternative proposal put forward in THE LANCET—viz., that the infirmary be re-built on a new site. Mr. Quarrier and Dr. McGregor Robertson both urged the unsuitableness of the present situation and the difficulty or impossibility of so altering the present building as to produce a really satisfactory hospital. To all this, however, the Lord Provost turned a deaf ear. He evidently had made up his mind in favour of the scheme for altering the building on the present site, and would have no other. His position, he maintained, rested on the reports of medical, surgical, and sanitary experts, and he objected strongly to the removal of the infirmary on the ground that to do so would make it of less value in relieving men injured by accidents in the neighbouring works. Under these circumstances the critics of the official scheme did not see their way to submit an amendment, and the resolution was accordingly carried unanimously. The Lord Provost then intimated the following subscriptions: Sir John Muir, £5000; A Friend, who preferred to conceal his name, £5000; Sir James Bain, £1000; Sir James Tring, £1000; Mr. John S. Templeton, £1000; Mr. Hugh Brown, chairman of the infirmary, £500. Whatever differences of opinion may exist on points of detail there is a universal desire both for the sake of the hospital and in honour of the occasion to make the movement a magnificent success. The anxiety of at least a section of the public and the profession in reference to the present site and the reconstruction scheme has certainly some basis, and it is not unreasonable to ask that the names of the medical, surgical, and sanitary authorities upon whose advice the official scheme is based should be published. It is only right that the public who are asked to contribute the funds shall be placed in a position to determine whether the guarantee that the money will be rightly expended is or is not adequate. There is no word of controversy concerning the decision to help the Royal Infirmary. But there are in many quarters reasonable questionings as to whether the official proposal embodies the best possible plan, and it will be to the interest of the authorities to meet this position by a frank statement of the sources of the advice upon which their decision has been taken.

University of Glasgow.

The University Court have granted leave of absence to Dr. P. A. Simpson, Professor of Forensic Medicine, on the ground of ill-health. Mr. Hugh Galt, M.B., C.M. Glasg., D.P.H. Camb., has been appointed to act as Lecturer and Examiner in Professor Simpson's absence. The Court have agreed to recognise attendance at the wards and dispensary of the Glasgow Eye Infirmary for the purpose of graduation in medicine under the new ordinances. The classes in Forensic Medicine and Public Health and in Practical Pathology at St. Mary's Hospital Medical School, Paddington, have also been recognised by the Court. The Students' Medico-Chirurgical Society have elected Professor John Yule Mackay to the position of Honorary President, Mr. Wm. Duncan, M.A., being appointed President. The winter session in the Faculty of Medicine is to close on the 19th inst.; in the other faculties the classes are continued into the following week.

Proposed Memorial to William and John Hunter.

The Faculty of Physicians and Surgeons of Glasgow have brought their proposal to establish a local memorial in honour of William and John Hunter, the brothers being natives of Lanarkshire, before the town council, and a small committee of the council, including the Lord Provost, has been appointed to act with the Faculty.

University College, Dundee.

At a recent meeting of the council of the College Dr. John Yule Mackay, Professor of Anatomy, was unanimously appointed Principal of the College. The new Principal is a graduate in medicine at the University of Glasgow, where for twelve years he occupied the position of senior demonstrator in anatomy and was also lecturer on embryology. Some ten years ago he was appointed to the chair of anatomy in Dundee. He is joint author with Professor Cleland of a recently published work on human anatomy, and has conducted a number of original researches, the most important being those dealing with the development of the heart and blood vessels.

Deaf-Mutism and its Prevention.

Dr. James Kerr Love of Glasgow read a paper on this subject before the Royal Society of Edinburgh on the 15th inst. Amongst the propositions advanced were the following: (1) that congenital deafness is hereditary; (2) the tendency to have deaf progeny was the same whether one or both parents be congenitally deaf; (3) the hearing brothers and sisters of the congenital deaf-mute are as liable, if they marry, to have deaf progeny as the deaf themselves; and (4) consanguinity of the parents emphasises the

hereditary tendency in the offspring, and in this way many cases of congenital deafness arise. In dealing with suggestions for prevention Dr. Love remarked that this aspect of the question was dominated by the fact that the tendency was a family one, and that nothing short of repressive measures was therefore likely to be successful. He advocated the appointment of a Commission to inquire into the whole subject.

March 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Accidental Poisoning by Arsenic.

ANOTHER case of accidental poisoning has just occurred in Dublin, in which some carelessness was fairly attributed by the verdict of the coroner's jury to the manufacturers of a special sort of rat poison. The facts were shortly as follows. A boy named Hardman obtained a package of cakes labeled "Hammond's Patent Rat Poison," and used some of them on three occasions for poisoning rats. One day he carelessly left a portion of a cake in his topcoat pocket before going to school. Some three of his schoolfellows subsequently obtained possession of it and ate it, with the result that all three suffered from symptoms of irritant poisoning, while the boy George Taaffe, aged ten years, died in about twelve hours. It appeared at the inquest on the 15th that the cakes resembled common meal cakes, and that there was nothing, in the absence of the special wrapper, to warn people that they were poisonous. The manufacturers of the patent poison were communicated with by telegraph and stated that its chief ingredient was arsenic. The jury found that the deceased died from accidentally eating Hammond's Rat-cake Poison, and they condemned the shape of the cakes as sold to the public, inasmuch as they resembled common brown cakes.

Death of Surgeon Thomas Gibbons, R.N.

Surgeon Thomas Gibbons, whose tragic death by drowning took place in Kingstown harbour on the 14th inst., was a graduate of Dublin University, where he obtained his medical degrees in 1892, and was only twenty-seven years of age. The deceased, accompanied by Lieutenant Ellison and two other officers of H.M.S. *Jason*, reached Kingstown from Dublin by the last train on Saturday night and hired a boat to put them on board their vessel. It was a perfectly calm night, but, as appeared at the inquest, the boat filled and foundered in mid-harbour, leaving its six occupants struggling in the water. Sad to say, Surgeon Gibbons and the two boatmen were drowned. An ominous circumstance overshadows this lamentable fatality in the fact that some years ago two brothers of the deceased boatmen lost their lives while rowing some bluejackets of H.M.S. *Belleisle* to their ship. Something happened to their boat, and they also were drowned in the harbour. It would seem time that some superintendence should be exercised by the proper authorities over boats which ply for hire at Kingstown, especially in reference to punts permitted to carry six men.

The Union Hospital, Belfast.

The following report has been made on the Belfast Union Hospital by Mr. Agnew, the Local Government Board inspector: "This hospital is in charge of a visiting and resident medical officer. There were ninety-one cases on the date of my inspection; the nursing staff consists of a superintendent, four day nurses, and three night nurses, all trained and efficient. This building, including about £4500 spent on it in recent years, has cost almost £30,000. This hospital, with its highly efficient nursing and medical staff, is admirably suited for the treatment of infectious cases. The wards are bright, cheery, clean, and well ventilated. The beds are comfortable, bedclothes clean and sufficient, dietary ample and suitable. The patients are well attended to. Most respectable people from Belfast and neighbourhood come to this hospital, as it is the only one in the city which possesses anything approaching the requirements of a fever hospital."

Sir W. MacCormac and Queen's College, Belfast.

On the afternoon of March 15th, in the presence of a large company, Sir W. Mac Cormac was paid a high compliment in the library of Queen's College, Belfast, his native city. When he was made President of the Royal College of Surgeons of England it was decided by his fellow graduates and friends that the time was come to do him some honour, and it was decided that the presentation of his picture should be made. This has been painted by Mr. Harris Brown, and has been handed over by the recipient to the authorities of Queen's College, Belfast. The President of Queen's College, who occupied the chair, having opened the proceedings, the Marquis of Dufferin and Ava, who was chairman of the Portrait Committee, in unveiling the picture, made one of those neat, diplomatic, and complimentary speeches for which he is so famous, and referred in very happy terms to Sir William Mac Cormac's distinguished career which had culminated in his election to the high office of President of the Royal College of Surgeons of England. Sir William Mac Cormac made a feeling reply, in which he briefly traced his career, and pointed out that he was, he believed, the only Irishman not educated at a London school who had ever attained to the position of President of the Royal College of Surgeons of England. The portrait represents the distinguished surgeon in his official robes. In the evening Sir William Mac Cormac was entertained to a banquet (held in Queen's College) by the members of the medical profession in Belfast. About seventy gentlemen sat down to dinner, among them being a considerable number of guests, the President of Queen's College, the Lord Mayor of Belfast, Sir W. Stokes (Dublin), Sir James Musgrave, B.Lit., D.L., Sir W. McCammond, and a number of the professors of the Arts Faculty. Professor Cuming occupied the chair; and the President proposed the following toasts: "The Queen," "The Prince of Wales and other Members of the Royal Family," and "The Lord-Lieutenant and Prosperity to Ireland" (to which the Lord Mayor of Belfast responded). In giving the toast of "Our Guest," Professor Cuming spoke in complimentary terms of Sir W. Mac Cormac's career from the time he was a student, an undergraduate of that College, until now. Sir William Mac Cormac very happily replied. The next toast, "Queen's College, Belfast," was proposed by Sir W. Stokes (Dublin), and to this the President of Queen's College replied. The last toast, "The Chairman," was proposed by Sir W. Mac Cormac, and Professor Cuming responded. Dr. McKisack and Dr. John Campbell were secretaries of the banquet and to them largely its success was due.

Sad Death of a Medical Man.

Some years ago Mrs. Riordan instituted proceedings against her husband, Mr. Riordan, medical officer of the Cloyne Dispensary District, for the purpose of procuring a judicial separation. He entered a counter-plea charging her with adultery. The jury exonerated Mrs. Riordan and the Court decided that her husband should provide her with separate maintenance. Lately, owing to some complaints as to the manner in which Mr. Riordan had discharged his duties, the Local Government Board called on him to resign his position as dispensary medical officer. This fact and the conviction that he had made an unfounded accusation against his wife preyed very much on his mind, and he endeavoured to make reparation to her by handing over the title deeds of some property he held to her solicitor for the purpose of having the property conveyed to her. He died very suddenly on the 16th ult., and as there were rumours in the locality that he had committed suicide by poisoning the coroner considered it prudent to hold an inquest last Wednesday. The evidence of his daughter was most pathetic. She stated that he was constantly expressing sorrow for the accusations he had made against her mother. Describing his final illness, which occurred at the breakfast-table, she said: "Whilst speaking to him I noticed that his eyes were getting dilated and he stared at me. After taking a mouthful of bread and tea, he looked at me again and said to me, 'Don't get excited.' He moved then towards the end of the table and came back again. I said, 'My God, you are dying. Tell me what is up with you, Father.' He said, 'There is nothing the matter with me.' I then put my arms around him, crying, when he said, 'Don't fret; it is apoplexy.'" The jury brought in a verdict of death the result of apoplexy, and expressed their most sincere condolence with the relatives of the deceased gentleman.

March 17th.

FOOTBALL CASUALTY.—During a match on the 10th inst. at Reading, between Woolwich Arsenal and Reading, the captain of the visitors' team fractured a bone of his left hand.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A Libel on the Memory of the late Professor Dolbeau.

THE family of Dr. Dolbeau, Professor of Surgery at the Academy of Medicine, who died some years ago, has just been successfully engaged in a very curious lawsuit. The appellants were anxious to obtain an injunction against a book published by M. Lissagaray dealing with the Commune in 1871. In this book the writer, himself an old Communist, accused Professor Dolbeau of having committed a grave offence against professional honour. He alleged that in 1871, when Dr. Dolbeau was surgeon-in-chief to the hospital at Beaujon, some wounded Communists who were in his wards were handed over by him to the police and accordingly shot. This story, which was spread abroad during the life of Dr. Dolbeau, naturally gave rise to a grave feeling against him. The students who attended his lectures hissed him, and he died a short time afterwards through worry and mortification at the hostility shown towards him. The real truth of the matter, as has been shown in the recent suit, is that in exact opposition to the allegations Dr. Dolbeau did his best to save the wounded Communists, and when they were convalescent tried to send them out of hospital under false names. Unfortunately, Dr. Dolbeau forgot the names agreed upon (or, rather, never knew them), and when the discharge-sheets were presented for signature a policeman who was there saw through the unskilful ruse and arrested three men. They were not, however, shot. These facts were established some years ago, and the children of Dr. Dolbeau now sought an injunction against M. Lissagaray's book, so as to have an official denial of the accusation which weighed so heavily on their father's memory. The court granted the injunction applied for.

The Plague.

A recent enactment of the Minister of the Interior annuls the decree of Feb. 9th, which prohibited the entry of vessels coming from India into the port of Marseilles. The new order establishes one uniform regulation for all French ports, the organisation costing 247.000 francs. The Minister also asks the Chamber for an additional sum of 150.000 francs to complete a sanitary installation at Marseilles. The prohibitory measures in force at this town with regard to goods coming from Bombay have given rise to a lawsuit between two large firms, of which the import house was unable to meet its engagements for the delivery of some oil-bearing seeds. The commercial courts decided that the decrees of prohibition constituted a case of *force majeure*, an accidental circumstance quite independent of the wishes of the importers, who could not be held responsible, and that therefore the contract lapsed without any damages. The Correctional Court of St. Malo has just condemned a captain who had made a false sanitary declaration at St. Pierre and Miquelon to eight days' imprisonment and a fine of 16 francs.

The Sanitary Service for the Paris Exhibition of 1900.

The organisation of this service has just been arranged in a most precise fashion and the works have already begun. The plan for a hospital to be built in the centre of the exhibition has been rejected. This idea was the suggestion of M. Marcel Baudouin, who had seen a similar establishment working at the Chicago Exhibition. But at Chicago the exhibition buildings were outside the town, far away from the hospitals, and the transport of the wounded or sick for so long a distance would have been both difficult and dangerous. At Paris, although the exhibition buildings cover an immense area, they are close to the populous quarters where hospitals abound; in fact, there are five of which the most distant is not more than ten minutes away from the centre of the exhibition. The ambulance service for the transport of the sick and wounded can therefore meet every want without incurring the enormous expense of the construction of a temporary hospital. At the head of the new service is Dr. Gilles de la Tourette, who has appointed fifty assistant surgeons to aid him, who will be drafted to different relief stations, where one or two will be always on duty. To particularise some other measures, all workmen who have not been vaccinated or re-vaccinated within the last two years will be gratuitously vaccinated at any medical station; exhibitors, their employés, or workmen, and all visitors wounded or stricken with sickness inside the buildings will receive first aid at the medical stations on application, or, if necessary, will be conveyed thither by the administration. For every sick or wounded person thus treated the medical staff will take a ticket and issue a special bulletin. The expenses of drugs, dressings, &c., will be defrayed by a special fund supplied by a rate of 1 per cent. on any contracts which the administration makes with contractors or exhibitors. If at the close of the exhibition there be any money over from this fund it will be handed to the Assistance Publique; if, on the contrary, the fund is found to be in debt the general fund of the exhibition will pay. The surgeons employed by this service will receive ten francs for every time they attend at the buildings. Despite the smallness of the fees, the applications to take part in the work are innumerable and include the well-known names of several hospital surgeons.

The Pharmacopœia.

The Minister-in-Charge has appointed a Commission to revise the Pharmacopœia, the use of which is obligatory on all druggists, and a revision of which is made about every ten years.

Horses at the Pasteur Institute.

It is well known that for the preparation of the various serums at the Pasteur Institute, and for the preparation of anti-diphtheritic serum particularly, there is at Garches a large stable capable of accommodating eighty horses. At first it was impossible to pick these animals with much care for want of funds. At present, since it has been shown that the state of health of the horse exercises a great influence upon the value of the serum, and more especially upon the accidents which may arise from its use, the horses have been selected with the greatest care. A recent bequest of two million francs from Baron Hirsch to the Institute has been the means of allowing large sums to be expended on the purchase of horses and so of improving the quality of the serum. Among these horses are many with a notable past, and I may mention the charger of Marshal Canrobert and Saint Claude, formerly a steeplechaser belonging to Baron Finot, and the winner in 1890 of the great hurdle race at Auteuil.

Banquet to Madame Clémence Royer.

A great banquet has been held at the Grand Hotel in honour of Madame Clémence Royer, who translated Darwin's works, and has always been a great promoter of the evolutionary movement in science. She recently attained her seventieth birthday, and has devoted her whole life to metaphysical biology. Always struggling with undaunted energy, suspected on account both of her Chauvinist proclivities and her sex, and receiving neither encouragement nor reward, she has now reached old age, without fortune or honours, in the Hospice Galignani. The banquet was attended by the *élite* of the scientific world at Paris, and a number of delegates from abroad were present.

March 17th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Plague and the Imperial Commission.

THE Russian authorities continue to watch with the greatest interest the spread of the epidemic of plague in India and to take measures to prevent it crossing their own frontiers. The principal measures undertaken by the Imperial Commission recently formed to deal with the danger are the following:—1. To send a scientific expedition to India to study the disease on the spot. This expedition was to sail from Odessa on the 12th (24th) of February on board one of the large vessels of the Russian volunteer fleet, *en route* for Bombay. At the head of the expedition is Dr. Vuisokovitch, Professor of Pathological Anatomy in the University of St. Vladimir at Kief. He is accompanied by his assistant in the same chair, Dr. Zabolotnui, and one or two senior medical students. The expedition is prepared for a four months' tour, and is instructed to make particular observations on the mode of propagation of the plague in India and the results of inoculations of anti-plague serum both as a preventive and as a curative measure. 2. A second measure is the prohibition for the present year of pilgrimages of Mussulman subjects of the Tsar, whether to Mecca or to the holy places of the Shiite sect, of which Meshed in Persia is the

most important. In the same spirit the *Government Messenger*, the official paper of the Government, recently published a proclamation from the Mufti of Orenburg, addressed to all the Imams and others in authority under him. In this proclamation the excellent advice is given to all good Mussulmans to abstain from going to Mecca or Medina this year, and to put off their Haj to a more favourable time, and the wise words of Mahomet are quoted, in which the faithful are told not to go to places where infectious diseases are prevailing, nor, when these diseases come to them, to run into foreign lands and so carry the infection with them. In Russia it is comparatively easy to put a stop to pilgrimages, by merely refusing to issue travelling passports or to give the police-permit to leave the country. The Russian Palestine Society has refused for the present to issue tickets to Christian pilgrims, of whom there is usually a more or less constant stream from Russia to the Holy Land and back. 3. The third measure of the Imperial Commission is to organise means for the preparation of Yersin's plague-serum on a large scale. 4. The fourth is to send small bodies of medical men and officials to the more vulnerable points on the frontiers to take local measures against the admission of the infection to the country. These points are situated along the Persian, Afghan, and Chinese frontiers. Special measures are also being taken along the shores of the Black and Caspian Seas, in the Caucasus, Transcaucasia, Transcaspia, and Central Asia generally. 5. The last measure of the Commission is the decision to publish in the Government gazette all the authentic information they receive about the spread of the plague and the measures that are being taken to guard against it.

The Russian Members of the International Sanitary Conference in Venice.

Russia's official representatives at the Sanitary Conference in Venice are M. Jonin, the Russian Minister in Switzerland, who took part in the similar Conferences in Venice and Dresden which met to deal with the subject of cholera in 1891 and 1892 respectively, and Professor Lukianof, the director of the Imperial (Oldenburg) Institute of Experimental Medicine in St. Petersburg, who has also gone to Venice as the representative of the Imperial Commission appointed to deal with the plague, whose activity has just been described.

Green Tea and the Plague.

Can green tea, imported from India, be a means of introducing the infection of plague? The authorities in the Caucasus appear to think that it may, and have put in action certain rather stringent measures to prevent the possibility of such an event. The importation of green tea is to be stopped at once and all trucks which have carried it are to be disinfected. Chests of tea already unpacked in Batoum are to be isolated and kept so by sentries; tea *en route* is to be stopped at Baku on the Caspian, and there quarantined in the same way. All persons who have been in contact with these goods are to undergo a six days' observation, and on the appearance of any suspicious symptoms are to be at once isolated. Without discussing the desirability of these measures, the question arises why green tea is selected for special treatment apart from other merchandise.

The English Colony in St. Petersburg and the Indian Famine.

A collection was recently made in the English church in St. Petersburg for the sufferers from the famine in India, and reached the large sum of £340. As the English colony numbers only some 3000 individuals (no exact figures are available), and many of these are Nonconformists, this sum must be regarded as a most liberal contribution to the relief of our Indian fellow-subjects.

PHILADELPHIA.

(FROM OUR OWN CORRESPONDENT.)

Cardiac Hydrothorax.

AT a recent meeting of the Pathological Society of this city Dr. J. Dutton Steele presented an interesting statistical paper from the Pepper Laboratory of Clinical Medicine upon the Distribution and Etiology of Cardiac Hydrothorax. An analysis of 2415 necropsies gave 173 cases of uncomplicated chronic heart disease in which there had been long-continued dilatation affecting particularly the right auricle. In the 75 cases of passive effusion into the pleura occurring in this series the effusion was unequal in distribution in 70 per cent., and of this number 77 per cent. were greater upon the right side. In 13 cases the effusion was entirely unilateral, and of these 10 were upon the right side. In equal bilateral hydrothorax the tendency to general anasarca was much increased, and in the unequal cases less than one-sixth showed œdema of any part. The writer reported 5 cases in which there was passive effusion much greater upon or entirely confined to the right side. In all there were undoubted signs of long-continued dilatation of the right auricle, and dropsy of the legs was either absent or followed the appearance of the hydrothorax. In none of the cases were there signs of aneurysm or tumour. The writer thought that the explanation for such effusions is that a dilated auricle by its pressure interferes with the venous and lymphatic circulation of the pleura of the same side, and the long-continued congestion causes the effusion. The right auricle is the most frequently dilated of any of the heart chambers in failing compensation, and hence the large percentage of right-sided effusions.

Infants' Feeding Bottles.

Buffalo, N.Y., has passed an ordinance making it "unlawful for any person or persons to use or to engage in the sale of any bottle, mechanism, or other device for the artificial feeding or nursing of infants or children under three years of age that has connected therewith a rubber tube, hose, or such contrivance." The Health Commissioner, Dr. Ernest Wende, stated that the infant mortality has fallen very materially since its adoption.

The Serum Diagnosis of Typhoid Fever.

In adopting the method of Wyatt Johnston for the diagnosis of typhoid fever, Dr. Gehrmann, of the Chicago Board of Health, has substituted pieces of sterilised mica for card, since the smooth, non-absorbent surface of the former renders it much more easy to effect a solution of the blood in water.

Medical Appointment.

Dr. A. C. Abbott, professor of hygiene in the University of Pennsylvania, has been appointed chief of the Department of Bacteriology of the Philadelphia Bureau of Health, vice Dr. B. Meade Bolton, who has accepted the chair of Pathology in the Missouri Medical College.

Competition among Hospitals.

Philadelphia is soon to have another hospital, to be known as the American Hospital for Diseases of the Stomach. Its scope will, however, be broader than the name implies, for, in addition to the treatment of gastric and intestinal disorders, the management intend to establish a laboratory for research work, giving particular attention to adulteration of food. Free lectures will also be given to the public upon this subject. It is to be hoped that the "charitable feature" of hospital work will be kept prominently in view, and that steps will be taken to prevent abuse as far as this is possible. Competition is so keen among the hospitals that special inducements are offered by some of them to the drivers of our police patrols, "and, of course, the case goes to the highest bidder." I believe the scheme was promulgated by the homœopaths; at all events, the Hahnemann Hospital has been the chief offender. A few of the institutions openly advertise for patients, while others are "written up" by the reporters. It seems that the staff are not averse to appearing in print; indeed, in many cases the technical description is highly suggestive of collusion. Since it is human nature to get as much as one can for nothing, the remedy lies not with the people but with the physicians, and while these latter actually bid for cases abuses of the most flagrant kind will exist.

Feb. 25th.

YORK COUNTY HOSPITAL.—The annual meeting of the York County Hospital was held in the building on March 9th, the Dean of York being in the chair. It was stated that an extension of the children's wards would soon have to be undertaken. The report also mentioned the necessity of taking some steps to improve the accommodation provided for the nurses, and suggested that the work might be carried out during the present year in commemoration of the prolonged reign of the Queen. The accounts showed that at the close of 1896 there was a balance of £141 in the hands of the treasurer.

Obituary.

GEORGE BRETHERTON BARRON, J.P., M.D. ABERD., M.R.C.S. ENG., ETC.

A PRACTITIONER of a most worthy and excellent type has just passed away in the person of Dr. Barron of Southport. He was the son of Mr. William Barron, a medical practitioner of Tarleton, and was educated at King's College, London. He became a Member of the Royal College of Surgeons of England in 1847 and took the degree of M.D Aberdeen in 1860. He settled down in the former year in Southport, in which town he has practised ever since. Besides his medical work he took a deep interest in all the affairs of the town, was one of the first improvement commissioners, and became a member of the town council in 1867, where his services were so valued that although a strong Conservative he was several times asked by the Liberals to allow himself to be nominated as mayor, but invariably declined the honour. He was a thoroughly earnest and enthusiastic Churchman and a prominent member of the Church Defence Association, while the cause of religious education found in him a most valuable supporter, and he was never tired of aiding national schools with both his time and his money. He was greatly interested in the Volunteer movement and was for a long time surgeon to the 13th Lancashire Rifle Volunteers. Dr. Barron was President of the Lancashire and Cheshire branch of the British Medical Association in 1885 and a representative of that branch on the Council of the Association from 1883 until the time of his death—a period of fourteen years. He was also for many years physician to the Southport Convalescent Hospital and the North Meols Dispensary, and frequently contributed papers on various medical subjects to the columns of THE LANCET. So recently as three or four weeks ago he was in full work, but his illness terminated fatally on March 10th, despite all that could be done for him. Dr. Barron, who was in his seventy-sixth year, leaves a widow and one son, Mr. Herbert G. Barron, who, like his grandfather and his father, is a member of the medical profession. The funeral took place on Saturday, March 13th, and was attended by a large number of every class and creed, all anxious to show respect to the memory of one who was universally loved and honoured as an honest and public-spirited citizen, an able, sympathetic, and kindly adviser in sickness, and a true and very real friend to all who knew him. The Conservative organisations in Southport, Birkdale, Formby, Great Crosby, and Waterloo were represented; also the 3rd V.B. K.L.R., the Church Missionary Society, and the Oddfellows' Society, with all of which bodies the deceased had been closely connected; and the Right Hon. G. N. Curzon, Under-Secretary of State for Foreign Affairs and member of Parliament for the Southport Division of Lancashire, attended specially from London to pay a last tribute of affection to his old friend's memory. Most of the medical practitioners of the town of Southport were also present, whilst the Lancashire and Cheshire Branch of the British Medical Association was represented by Mr. Mitchell Banks of Liverpool, ex-President of the branch; Dr. Samuel Woodcock of Manchester, president-elect; Dr. H. H. Vernon, medical officer of health of Southport and President of the Branch; Dr. R. Harris, a member of council of the Branch; and Dr. Davidson, physician to the Royal Infirmary, Liverpool. By the death of Dr. Barron the world is poorer by the loss of a good man, whilst our profession suffers by the falling out of its ranks of one who well and worthily maintained the dignity and credit of an English general practitioner.

THOMAS DICKINSON, M.R.C.S. ENG., L.S.A. LOND.

MR. THOMAS DICKINSON, late of Sloane-street, whose death occurred on March 3rd, was the son of William Dickinson, an esteemed practitioner of Chelsea. He was educated at King's College School, London, and in due course commenced and finished his medical studies at King's College Hospital under the auspices of Partridge, Daniell, Fergusson, Todd, and Budd. On the conclusion of his hospital career he travelled in Spain for a time in medical charge of a patient. On his return to Chelsea he was appointed medical officer to the district in which he lived, and held that appointment for years, being afterwards elected medical officer to the workhouse. This post he held until the requirements of the Poor-law necessitated the establishment of a new infirmary and the appointment of a resident medical officer. He then settled in Sloane-street, where for many years he conducted a large practice, being medical officer to the Brompton and Belgrave Dispensary and a highly popular practitioner in the neighbourhood. Soon after the establishment of the 1st Middlesex Royal Engineers (Volunteers) he accepted the post of assistant surgeon, as the medical officers were then designated, under the command of Colonel the MacLeod of MacLeod, and in due course was gazetted surgeon. During this time he performed all his military duties to the satisfaction of his commanding officer, taking considerable interest in the corps and being one of the first to pass the Army medical examination which was then required of all medical officers by the Volunteer regulations. Mr. Dickinson was well known among his professional brethren and patients as a cordial, upright, and conscientious man, and those who were acquainted with him socially have to lament in his death the loss of a friend endeared to them by a genial character in all bearings of life. Though busily occupied in professional work, he took an active part in all matters that concerned his fellow parishioners, being interested in and advancing the interests of many local charities and so earning the reputation of an enlightened and conscientious citizen. Mr. Dickinson was a Member of the Royal College of Surgeons of England and a Licentiate of the Society of Apothecaries of London. He was also for some years on the Council of the Medical College at Epsom, which post he held until a short time before his death. He leaves behind him a widow, a son, Dr. Thomas Vincent Dickinson, and a daughter, the wife of Mr. W. H. Bennett.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. L. von Halban, Professor of Forensic Medicine in the University of Cracow, and for many years editor of the well-known Polish journal, *Przeglad lekarski*. He was fifty-nine years of age.—Dr. T. G. Rowand, formerly Professor of Therapeutics and Materia Medica in the University of Pennsylvania.—Dr. B. Boyer, Professor of Therapeutics in the French School of Medicine, Beyrout.—Dr. Antonio Arantes Pedroso, Professor of Surgical Pathology in the Medical School of Lisbon.—Dr. Caussanel, Professor of the Diseases of Children in the Medical School of Algiers.—Dr. Hartshorne, formerly Professor of Medicine in the University of Pennsylvania.—Dr. Perry Millard, formerly Professor of Surgery in the University of Minnesota.

IN MEMORIAM.—At a meeting of the executive committee of the Merthyr Tydvil Hospital on the 9th inst. a letter was read from Mrs. Harrap and family of Gwaunfarren, Merthyr Tydvil, intimating that it was their wish to subscribe a sufficient sum, presumably from £1300 to £1400, to endow a bed in the accident ward of the hospital as a memorial of the late Mr. Richard Harrap. The offer was gratefully accepted.

THE DIFFUSION OF SMALL-POX.—The outbreak of small-pox which last month threatened the county of London has in a large measure died out. In the four weeks ended on Feb. 27th there were 48 notified cases of the disease in the metropolis, of which total 29 were from the Camberwell sanitary area, and 6 were from the Strand board of works district. In each of these areas, however, the outbreak was limited to a circumscribed locality; but the authorities are to be congratulated on having curtailed the spread of the disease to the small dimensions attained. The registered deaths from small-pox within this period were only 4 in London, but there were 6 additional deaths in the first week of March, whilst last week there was but 1 death, that of a female infant aged under one year, of whose vaccination no statement is forthcoming. There were no cases admitted to the hospital ships last week, and 30 cases remained on board at the close of the week.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having previously passed the necessary examinations and having now attained the legal age of twenty-five years, have been admitted Fellows of the College:—

Linington, William West, L.R.C.P. Lond., St. Mary's Hospital (diploma of Member dates July 27th, 1893).
Sprawson, Frederick Charles, L.R.C.P. Lond., King's College Hospital (diploma of Member dates May 10th, 1894).

The following gentlemen, having passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Members of the College:—

Blieden, Max, M.D. Pa., University of Pennsylvania, U.S.A., and St. Bartholomew's Hospital.
Preston, Lionel Litchfield, M.B., B.S. Durh., L.S.A. Lond., University of Durham and Middlesex Hospital.

INTER-HOSPITAL FOOTBALL.—The final tie of the competition for the Hospitals Association Cup took place on Wednesday last at the Essex County Ground, Leyton, and was won after a good game by Guy's Hospital, who beat London Hospital by one goal to none.

UNIVERSITY OF CAMBRIDGE.—Professor Rucker, F.R.S., has been appointed Reade lecturer for the present year. Mr. F. F. Blackman, of St. John's College, has been appointed University Lecturer in Botany. Dr. Arthur Willey, whose recent discovery of the eggs of nautilus has excited much interest, has been elected to the Balfour Studentship in Animal Morphology for another year. The debate on the proposal to confer titular degrees on women has run to the unprecedented length of three days. Special numbers of the *Reporter* containing the report of the Syndicate and the speeches delivered will be published, and may be had (price 7*d*.) on application to the University Press. At the congregation on March 11th the following medical degrees were conferred:—M.D.: C. W. Windsor, M.A., non-collegiate. M.B.: W. G. Richards, B.A., Christ's. M.B. and B.C.: A. S. J. Pearse, M.A., Trinity; H. C. Haslam, B.A., Caius; F. G. Thomas, B.A., Caius; J. T. Wills, B.A., Caius; R. de S. Stawell, B.A., Trinity Hall; C. B. Stewart, M.A., Christ's. A welcome of extraordinary enthusiasm was given to Dr. Nansen by a crowded congregation on March 16th, when the honorary degree of Doctor in Science was conferred upon him.

DIPHTHERIA IN LONDON.—In the four weeks ended Feb. 27th the notified cases of diphtheria in London were 916 in number, every one of the sanitary areas of the county being invaded, though five of them had only 9 notified cases in all among them. But the other four districts had an aggregate number of 289 notifications, or nearly one-third of the total for the whole of London; and if the other four districts, each with 39 and more notifications, be taken, then we find that in eight of the sanitary areas there occurred more than one-half of the total notifications in the county, comprised of forty-three sanitary districts—excluding, that is, the Port of London. The weekly average of notified cases in the period under review was 229. The registered deaths, 185 in all, yielded a weekly average of 46. The case mortality per cent. of notifications was thus 20·2. Comparing the period with that preceding it, namely, the four weeks ended Jan. 30th, we find that the weekly average of notified cases in the earlier period was 239, though the per case mortality was as high as 26·1 per cent. Thus we find in the February period a distinctly favourable state of affairs, particularly when it is remembered that the January period compared favourably with its predecessors. In the two weeks of March ended the 13th the registered deaths in London were 43 and 53. The latter total was 21 in excess of the corrected decennial average for the tenth week of the period 1887–96. Two of the deaths were of infants under one year of age, and two of persons aged over twenty years. Wandsworth is credited with 8 of the deaths, Camberwell with 5, and Kensington, St. Pancras, Hackney, and Bethnal-green each with 4 deaths. The admissions to hospital in the week numbered 97, against 104, 102, and 112 in the preceding three weeks, and on Saturday last there were 834 cases still under treatment. In the "Outer Ring" 10 deaths from diphtheria were registered, of which 4 were in the Edmonton district.

THE JENNY LIND INFIRMARY, NORWICH.—In commemoration of the sixtieth year of the Queen's reign it has been decided to collect a sum of money to be called the Diamond Jubilee Fund, for the purpose of building at Norwich a new Jenny Lind Infirmary for Sick Children. A site for the building has been presented by Mr. J. J. Colman, and the Earl of Leicester (Lord-Lieutenant of the county) has given a doration of £2000. The present Jenny Lind Infirmary was established in 1853 and has twenty-six beds.

CIRENCESTER COTTAGE HOSPITAL.—The annual meeting of Cirencester Cottage Hospital was held on March 2nd, under the presidency of the Ven. Archdeacon Hayward. The twenty-second report of the committee showed that 101 new cases were admitted during the year, making 1993 during the twenty-two years the hospital had been opened. Structural additions and improvements had been made to the building at a cost of £420, which had been paid out of the reserve fund. The ordinary receipts had been £588 and the expenses £430.

PLURALISTS.—At the last meeting of the Kidwelly Town Council it was stated that only one application had been received for the amalgamated appointment of road surveyor, sanitary inspector, lamp-lighter, water inspector, building inspector, and quay caretaker and collector, for which a salary of a guinea a week had been offered. It was finally resolved to re-appoint the former road surveyor and to add to his office that of building inspector, and also to invite applications for the amalgamated offices of sanitary inspector, water inspector, lamp-lighter, and quay inspector at a salary of fifteen shillings a week.

GLOUCESTER DISTRICT NURSING SOCIETY.—The annual meeting of this society was held on March 4th, under the presidency of Dean Spence. The report showed that the receipts were £490, against £565 in the preceding year, and the expenditure was £630, against £550. It was decided to affiliate with the Victoria Jubilee Institute for Nurses. The £1461 balance from the small-pox nursing fund publicly subscribed had been invested in Consols, and it was thought that the donors would consider the erection of a permanent nurses' institute as a fitting application of the money.

SWANSEA NURSING INSTITUTE.—The annual meeting of the Swansea Nursing Institute was held on Feb. 22nd, under the presidency of the Mayor. The annual report stated that there were seventeen nurses on the staff. A district nurse who had been appointed was doing excellent work amongst the poor, and an anonymous donor had promised to defray the expense of another. The earnings of the nurses had exceeded those of the previous year by £61, the total being £822. Mrs. Llewelyn had given £500 towards the cost of the house, which had been £1172. This Nursing Institute is carrying on a most useful work at Swansea.

PROPOSED COTTAGE HOSPITAL FOR PENARTH.—At a meeting held at Penarth on March 3rd it was unanimously resolved to celebrate the Queen's Diamond Jubilee by the erection of a cottage hospital. The chairman said that to carry this out efficiently at least £2500 would be required. The structure would be intended to accommodate ten or twelve beds, at an estimated cost of £50 per bed. Mr. R. F. Nell, M.R.C.S.Eng., L.S.A., stated that the medical men of Penarth were desirous that such an institution should be established to save the necessity and expense of sending patients to Cardiff and to relieve their sufferings immediately on the spot.

THE DELAY IN ASSIZE TRIALS.—In the recently published Blue book on Judicial and Criminal Statistics for 1895, pages 33 to 35 and 175 to 178 deal specially with the detention of prisoners awaiting the assizes. This subject has not hitherto been given a place in the Blue-book; the fact that this information was to be published was made known in the House of Commons on Feb. 18th by the Home Secretary in the course of a reply to Mr. Henniker Heaton, who had called the attention of the Government to several instances in which hardships had been inflicted under the present system. Mr. Heaton gave details of eleven cases occurring during the last three years in which persons had been acquitted at Maidstone Assizes, six of them having been in prison awaiting trial for over three months, two for over four months, two for over five months, and one for over six months.

H.R.H. PRINCESS CHRISTIAN has fixed May 6th for the St. John Ambulance *fête* and competition at the Crystal Palace in commemoration of the Queen's Diamond Jubilee.

METROPOLITAN CONVALESCENT INSTITUTION.—The annual meeting of the Metropolitan Convalescent Institution was held on Feb. 23rd at the office, 32, Sackville-street, Mr. Richard B. Wade presiding. It was stated in the report that during the past year 5064 men, women, and children were admitted to the homes.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—The annual meeting of the Royal Hospital for Diseases of the Chest, City-road, was held on March 15th, the Lord Mayor presiding. The report showed that 742 in-patients were under treatment during the year, and there were 9600 out-patients, who made upwards of 24,000 attendances. The total income, including £2300 received from legacies, was £10,108, and the total expenditure was £7459.

HASTINGS AND EAST SUSSEX HOSPITAL.—The annual meeting of the Hastings and East Sussex Hospital was held in the building on March 9th, the Mayor of Hastings being in the chair. At the beginning of the year forty-eight in-patients remained under treatment, and 634 were admitted in the course of the year; the average stay in the hospital was between nineteen and twenty days. The financial position of the charity was much better last year than during the previous year, the credit for this result being mainly due to a committee of ladies, who raised £1001.

MUNICIPAL HONOURS TO MEDICAL MEN.—A correspondent reminds us in a letter from Australia that Mr. Hall Owen, M.R.C.S.Eng., M.R.C.P.Irel., is the present Mayor of the city of South Melbourne, a city with 36,000 inhabitants and prior to the period of depression of 46,000 inhabitants; and that Dr. Cascaden is the present Mayor of the adjoining town of Port Melbourne, both gentlemen having been unanimously elected. Our correspondent considers, and so do we, that members of the profession at home like to learn of instances of honour done and trust confided to members of the profession abroad.

THE DENTAL HOSPITAL OF LONDON.—Lord Kinnaird presided over the thirty-ninth annual meeting of this institution, which was held on the 11th inst. at the hospital in Leicester-square. The report was one of a congratulatory kind, testifying again to the continued and increasing usefulness of this important charity. During the year 1896 no less than 57,654 cases had been attended to, many of them being treated for preservation of existing teeth rather than extraction. It was hoped soon to proceed with the building of the new hospital and school, the present premises being totally inadequate for the purpose and considerably hampering the extension of the good work now going on, both educational and charitable. The committee appeal for donations and subscriptions, which may be sent to the secretary, Mr. J. F. Pink, at the hospital, Leicester-square, W.C.

PRESENTATIONS TO MEDICAL MEN.—Dr. G. Barbidge White of South Richmond-street, Dublin, was presented at a recent meeting of the Committee of Inspection of the Masonic Grand Lodge of Ireland with a purse containing the fees for the M.D. degree of Dublin University. The presentation was made as a testimony of esteem and recognition of medical services rendered in the interests of the committee.—Mr. Norman G. Douglas, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., of Scarborough, was the recipient, on the 1st inst., at a meeting of the Central Evening Continuation Board Schools, on the close of the classes which he has held on "Ambulance Aid" and "Sick Nursing," with a silver cigar-case in appreciation of his services.—At a successful entertainment and concert, in the Lostock Hall Mission School, Preston, on the 1st inst., the proceeds of which were in aid of the local ambulance corps, Mr. Thomas Sharples, L.R.C.P., L.R.C.S. Edin., the instructor, was presented by the members of the classes with two volumes of Dr. Nansen's new work.—On the 2nd inst., in the Roman Catholic School, Brownedge, Bamber Bridge, on the distribution of certificates and medallions in connexion with the local branch of the St. John Ambulance Corps, Miss Whitehead, on behalf of the ladies' sick nursing and first-aid class, presented to Mr. C. J. Trimble, L.R.C.P. Edin., D.P.H., a silver cigarette case, as a token of gratitude for his ambulance instruction.—At the annual general meeting of the Governors of the Wolverhampton and Staffordshire General Hospital, held on the 9th inst. a portrait of himself, painted in oils, was presented to Dr. Totherick by Canon Davies, a member of the committee, and in the name of the subscribers, together with a facsimile in an oak cabinet, bearing the following inscription: "To James Yeomans Totherick, M.D., M.R.C.P.E. We, the undersigned, on behalf of a large number of friends and admirers, beg your acceptance of your portrait in oils, together with this memento of the occasion, as an expression of the high esteem in which you are held by all classes of society, and in recognition of your valuable and faithful services for the past twenty-five years as hon. physician to the Wolverhampton and Staffordshire General Hospital." As a memorial of Dr. Totherick's long connexion with the hospital it is intended to hang the portrait in the institution.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Metropolitan Poor-law Children.

SEVERAL Members of the House of Commons have been interesting themselves in the draft order of the Local Government Board on this subject, and if opportunity offers they will raise a general debate in the hope that the Local Government Board may be induced to re-consider their decision.

Midwifery Orders in Poor-law Unions.

It is the purpose of Mr. Heywood Johnstone to move next week for a return showing with regard to each Union in England and Wales the number of confinements in the workhouses during 1896 and the number of orders in respect thereof given to visiting medical officers under the general order of the Poor-law Commissioners, the total amount paid to the medical officers in respect of the orders, the number of orders given to district medical officers in respect of confinements other than in the workhouse and the amount paid in respect of them, and the number of district nurses appointed under the general order of the Local Government Board.

HOUSE OF COMMONS.

THURSDAY, MARCH 11TH.

Suppression of Rabies.

Mr. Walter Long, replying to Mr. Stephens, said he was aware that a dog was killed by the police at Hendon on March 4th, and that upon post-mortem examination by the county veterinary inspector rabies was found to be present. Every possible effort was being made to expedite the completion of the arrangements the Board of Agriculture proposed to make for the suppression of rabies.

The London Water Question.

At this sitting of the House there was a long debate on the London water question in connexion with a series of eight Bills for the purchase of the undertakings of a similar number of the water companies. Mr. Sydney Buxton introduced the subject by moving the second reading of the first of the Bills—that for the purchase of the undertaking of the Chelsea Company. He claimed for the London County Council that the time had come when the water companies should no longer be private concerns, but be in the possession and under the control of the ratepayers.—Sir F. Dixon-Hartland moved the rejection of the Bill, claiming that its terms were unfair both to the ratepayers of London and to the shareholders of the company. Mr. Chaplin intimated that the Government would oppose this and the other Bills, but would be willing to appoint another Royal Commission, and in the meantime introduce a measure to strengthen and improve the position of the water consumers in the metropolis by giving them easier redress when they were aggrieved by failure to fulfil obligations on the part of the water companies. The debate went on for five hours, the result being that the Chelsea Bill was rejected by 258 to 123 votes, and in consequence of this decision the other seven Bills were withdrawn.

FRIDAY, MARCH 12TH.

Experiments on Living Animals.

Mr. MacNeill asked the Secretary of State for the Home Department, in view of the fact that in the return showing the number of experiments performed in the year 1895 on the bodies of living animals in the United Kingdom, amounting in all to 4679, of which 3119 were performed under special certificates dispensing with anæsthetics, the term "experiment" meant the whole series of experiments carried out on a particular line of research, and that 200 or 300 animals were at times used in a single experiment, while 80 or 90 was a common number; whether there was any record kept of the number of animals used in the 4679 experiments of 1895; and whether he would, under the powers conferred upon him by 39 and 40 Vic., c. 77, s. 9, direct that the vivisectors in making reports for the vivisectors' return for 1896 should state the number of animals used in each experiment.—Sir Matthew White Ridley replied: The hon. Member is under an entire misapprehension. The number of animals used does not exceed the number of experiments given in the return. In fact, it is less.—Mr. MacNeill further asked the Home Secretary whether the inspectors appointed under 39 and 40 Vic., c. 77, for the purpose of securing a compliance with the provisions of that Act to visit places registered for

vivisection, did in fact visit such places during the performance of experiments on the bodies of living animals; whether they inspected the bodies of the vivisected animals after the performance of these experiments, or were usually present at vivisections, and did they usually see the bodies of the vivisected animals; had the inspectors any power to mitigate or prevent the infliction of pain on animals by vivisectors who experimented under Special Certificate A, which permitted its holder to experiment without anæsthetics; and would he state in what degree or to what extent inspection operated as a prevention of unnecessary pain being inflicted on living animals.—Sir Matthew White Ridley replied: Yes sir, the inspectors both visit registered premises during the performance of these experiments and see the bodies of animals upon which experiments have been performed. Certificate A is never allowed except for inoculations and similar trivial operations, and in every case a condition is attached to prevent unnecessary pain. The safeguards against the infliction of unnecessary pain are the character of the persons to whom licences are given, the careful inquiry that is made by the Home Office beforehand, and, lastly, the stringent conditions under which licences are given and certificates allowed, and which it is the duty of the inspectors to see are properly observed.

Darenth Asylum.

Mr. Chaplin, replying to Mr. Pickersgill, said he was informed that there were no children at the Darenth Asylum who were feeble minded but not imbecile. The children at the asylum were legally paupers. It was not the intention to remove the children from the asylum.

The Health of the 2nd Essex Regiment.

Mr. Sinclair asked the Under Secretary of State for War whether fever had broken out in the 2nd Battalion of the Essex Regiment now stationed in India, and if so could he state to what extent; and whether, seeing that the 2nd Battalion of the Essex Regiment left England in 1882 for foreign service and had never returned to the United Kingdom since that time, the Secretary of State for War would recall that battalion home as soon as possible to allow it to be stationed in its own county for a time after such a lengthened period of foreign service.—Mr. Brodrick replied that in the return from the battalion dated Feb. 1st the health was described as "indifferent," but the numbers in hospital were about normal and the prevailing diseases appeared to be of a specific character. The average tour abroad of an infantry regiment was seventeen years. The 2nd Battalion of the Essex Regiment left England in 1882 and was ninth on the roster for return home.

New Regulations for Wool-sorting.

Sir Matthew White Ridley, in reply to Sir Charles Dilke, said that the special rules with regard to the wool-sorting industry were being served upon the occupiers of factories and workshops to which they applied.

The Unhealthiness of Sierra Leone.

Mr. Price asked the Secretary of State for the Colonies whether he had any confirmation of the report that during the first seven months of 1896 out of about twenty English officials in the colony of Sierra Leone there were three deaths and five cases in which the officials had to be invalided home; whether officials had to serve fifteen months at Sierra Leone before obtaining leave, whereas in the Gold Coast colony they had only to serve twelve months; and whether, seeing that Europeans were particularly subject to illness during the later months of their stay on the coast, the Colonial Office could see its way to making the rules as to leave in Sierra Leone the same as in the Gold Coast colony.—Mr. Chamberlain said, in reply: I regret to state that during the months in question, which were exceptionally unhealthy, no less than five deaths occurred among the English civil officials, of whom there were about thirty, and three were invalided home, besides two (including the Governor) who were invalided to the Canary Islands. The periods for which officials have to serve in Sierra Leone and the Gold Coast before obtaining ordinary leave are as stated, but in case of illness sick leave is granted sooner. It does not appear that Europeans are more subject to illness during the later months of their stay than during the earlier ones; and, while I am anxious that everything possible should be done to improve the conditions of life on the Coast, I do not think that a sufficient case has yet been made out for reducing the tour of service in Sierra Leone to twelve months and throwing a considerable burden on the finances of the colony. Sierra Leone, as far as statistics go, is more healthy than the Gold Coast.

MONDAY, MARCH 15TH.

Exercise for Prisoners.

Mr. Pickersgill asked the Secretary of State for the Home Department whether he was aware that a convict undergoing the preliminary stage of his term had for a period of nine months to work, eat, and sleep in one small cell, in which he was confined for twenty-three hours out of every twenty-four at all seasons of the year; whether he was aware that several principal officers of prisons had described this confinement as excessive and as producing injurious results, both moral and physical; and whether he would confer with the Prison Commissioners with a view to the granting to this class of prisoners more than one hour's exercise per diem.—Sir Matthew White Ridley said he was aware that a convict under a sentence of penal servitude, with the exception of his daily attendance at chapel and hour of exercise, passed the first nine months of his sentence in separate confinement. He believed the hon. member to be misinformed as to the opinions held by the principal officers of the prisons in which convicts were received with regard to the effects of this confinement. The amount of exercise necessary for the health of each prisoner was left by statute to be determined by the prison surgeon, and he was perfectly content that under that statute the surgeons should exercise a liberal discretion.—Mr. Pickersgill further asked the right hon. gentleman whether he was aware that the Governor of Dartmoor Prison had condemned the system of separate confinement for nine months before the departmental committee which inquired into the subject.—Sir Matthew White Ridley said he was not aware of it.

Reformatories for Inebriates.

Sir Matthew White Ridley, replying to a question addressed to him by Mr. Hobhouse, said he was afraid he could not say when the Bill for the establishment of reformatories for inebriates was likely to be introduced. The Bill had been for some time in a forward state of preparation, but there were still remaining some important points which required to be settled.

The Lunacy Question.

Sir Matthew White Ridley informed Mr. Hobhouse that the inquiry into the causes of the increase of lunacy in England and Wales had been made and the report laid on the table of the House. Copies of the report would be delivered to Members almost immediately.

Death in a Lunatic Asylum.

Mr. Murnaghan asked the Chief Secretary to the Lord Lieutenant of Ireland—(1) whether his attention had been called to the verdict of the coroner's jury recently given at Belfast at the inquest on the body of Mrs. Beggs, who died in the Belfast Lunatic Asylum; (2) whether he was aware that the eminent medical man who conducted the post-mortem examination found a number of her ribs and breast bone broken, and that the jury found that the bones were not broken at the time she was taken from her home to the asylum; (3) whether the medical officers of the asylum had at any time and if so at what date, discovered that her bones were broken; and (4) whether, considering the facts disclosed at the inquest, the Government would, in the interests of inmates of lunatic asylums, have further inquiry made into the matter.—Mr. Gerald Balfour replied that the facts were as stated in the first and second paragraphs of the question. The verdict of the coroner's jury was that the injuries were not received at the patient's home, and that there was no evidence to show when and how they had been received. Deceased was admitted to the asylum on Jan. 5th, and on Jan. 21st the asylum medical officers discovered the injuries. An inquiry had been held into the matter by the inspectors of lunatic asylums, who would forward their report to the board of governors of the asylum.

TUESDAY, MARCH 16TH.

Metropolitan Pauper Children.

Mr. T. W. Russell, replying to a question on this subject, said that the President of the Local Government Board understood from the report of the proceedings at the Conference of Poor-law Guardians held to consider the draft order that the voting on the resolution to the effect that it was desirable that separate provision such as was indicated in the draft order should be made for special classes of children was 63 for and 15 against; and that the resolution to the effect that the Local Government Board, before constituting a new board, should consider whether the duties created by the order could not be carried out by some existing authority or authorities was carried by a majority of 42 votes—56 voting for and 14 against the resolution. The President had been informed of the resolution which had been passed by the London County Council to the effect that, while recognising the necessity for alteration in the present mode of dealing with the class of children referred to, the Council were of opinion that the establishment of a new and distinct metropolitan central authority for the care of a section of Poor-law children was undesirable and calculated to lead to needless expense. He had also received a copy of a report of the general purposes committee of the Metropolitan Asylums Board (which report was adopted by the managers on Saturday last) expressing their willingness to undertake the care of all or any of the classes of children referred to. The representations which had been made to the President in favour of the managers of the Asylums District undertaking the duty, in preference to the constitution of a new board of managers, would receive his careful consideration. He could not, however, give any undertaking to postpone the official promulgation of a permanent order until an opportunity had been given to the House to discuss the subject.

Medical Officers to Volunteer Corps.

Mr. Brodrick said, in reply to Colonel Dalbiac, that the question had been carefully considered by the War Office, and it had not been thought necessary to extend the joining allowance now given to combatant Volunteer officers to the medical officers.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ARBUCKLE, H. W., M.D. Aberd., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer for Stainforth.

ARKLE, C. J., M.D. Lond., M.R.C.P., has been appointed Assistant Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

BARLING, A. S., L.R.C.P. Lond., M.R.C.S., has been appointed an additional Honorary Surgeon to the Royal Lancaster Infirmary.

BLAKISTON, A. A., M.R.C.S., has been re-appointed Medical Officer by the Glastonbury Town Council.

BISDEE, A. J., M.R.C.S., has been re-appointed Medical Officer for the Stansted Sanitary District.

BOWER, W. G., L.R.C.P. Lond., M.R.C.S., has been appointed an Honorary Physician to the Sheffield Hospital for Ear, Throat, and Skin Diseases.

BRYANT, C. H., M.B., B.S. Durh., F.R.C.S. Eng., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the Sussex County Hospital, Brighton, vice A. H. Buck, resigned.

BURGESS, ARTHUR H., M.B. Vict., L.R.C.P. Lond., M.R.C.S., has been appointed a Junior Resident Medical Officer for the Manchester Children's Hospital.

CULLEN, JOSEPH J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Castlenock Dispensary District, vice R. F. Maguire.

FELLOWS, F. M., M.B., C.M. Edin., has been appointed House Surgeon to the General Hospital, Great Yarmouth, vice R. W. Montserrat, resigned.

GANNER, JOSEPH, M.B. Lond., L.R.C.P., M.R.C.S., has been appointed a House Physician to the Birmingham General Hospital.

GAYLOR, EDWARD, L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer by the Alfreton Urban District Council.

GIBSON, E. ARTHUR, M.B., C.M. Glasg., L.M. Rotunda, has been appointed Obstetric Physician to the Glasgow Training Homes for Nurses, vice A. W. Russell.

HAMILTON, JOHN, M.D. Durh., F.R.C.S., L.R.C.P. Edin., has been re-appointed Medical Officer of Health by the Swadlincote District Council.

HELME, W., C., M.B., C.M. Edin., has been appointed an additional Honorary Surgeon to the Royal Lancaster Infirmary.

HINDE, F. R. B., M.D. Edin., M.R.C.S., has been re-appointed Medical Officer for the Sawbridgeworth Sanitary District of the Bishop Stortford Union.

HUNT, A. H. W., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Gynæcologist to the Wolverhampton and Staffordshire Hospital.

JONES, S. LLOYD, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Junior Medical Officer to the London County Asylum, Colney Hatch, Middlesex.

JONES, T. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed an Honorary Physician to the Sheffield Hospital for Ear, Throat, and Skin Diseases.

JOSCELYNE, ARTHUR E., M.R.C.S., L.R.C.P., L.S.A., has been appointed Medical Officer with charge of Out-patients to the Miller Hospital, Greenwich, vice W. T. B. Donelly, deceased.

LAMPORT, H. C., M.B., C.M. Edin., has been appointed an additional Honorary Surgeon to the Royal Lancaster Infirmary.

LITTLEJOHN, HARVEY, M.A., M.B., B.Sc., F.R.C.S. Edin., has been appointed Lecturer on Medical Jurisprudence and Public Health at the School of Medicine, Surgeon's Hall, Edinburgh, vice Sir H. D. Littlejohn.

LOGAN, R. R. W., M.R.C.S., has been re-appointed Medical Officer of Health by the Hartshorne and Measham Rural District Council.

MARSH, F., F.R.C.S., L.R.C.P. Lond., has been appointed a Surgeon for the Birmingham and Midland Ear and Throat Hospital.

MORTON, W. BRITAIN, M.D. Lond., L.R.C.P., M.R.C.S. Eng., has been appointed Resident Medical Officer at Brislington House, Bristol.

PHILPS, F. G. M., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to Out-patients at the Chelsea Hospital for Women.

ROSS, D. M., M.D. Durh., F.R.C.S., M.R.C.P. Lond., has been appointed an Honorary Medical Officer for the Cottage Hospital, Boscombe, vice P. W. G. Nunn, resigned.

ROUSE, E., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Barnstaple Port Sanitary Authority.

SCOTT, H. AINSLIE, M.B., Ch.B. Vict., M.R.C.S., L.R.C.P. Lond., has been appointed a Junior House Surgeon to the Ancoats Hospital, Manchester.

SIMON, R. M., M.D. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed to the Professorship of Forensic Medicine, Mason College, Birmingham, vice J. St. S. Wilders, resigned.

SOMERVILLE, GEO. L., M.B., C.M. Edin., has been appointed an Honorary Medical Officer for the Stockton Hospital.

STANLEY, DOUGLAS, M.D. Edin., M.R.C.P. Lond., has been appointed Extra Acting Physician to the Children's Hospital, Birmingham, vice G. W. Powell.

TORNEY, G. PARSONS, B.A., L.R.C.S. Irel., L.R.C.P. Irel., L.M., has been appointed Medical Superintendent of the Lincolnshire County Asylum.

TUCKETT, W. R., M.R.C.S., has been re-appointed Medical Officer to the Charnwood Forest Convalescent Home.

WILLIAMS, E. R., M.R.C.S., L.R.C.P. Lond., has been appointed Surgeon-Lieutenant to the 1st V.B. the Welsh Regiment.

WRIGHT, W. H., L.R.C.P. Irel., M.R.C.S., has been re-appointed Medical Officer of Health by the Alvaston and Boulton District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHLEM HOSPITAL.—Two Resident Clinical Assistants for six months. Apartments, complete board, and washing provided.

BIRKENHEAD UNION.—Assistant Medical Officer for one year, for the Infirmary, Workhouse and Schools. Salary £80 per annum, with board, washing, and apartments. Applications to the Clerk to the Guardians, Clerk's Offices, 45, Hamilton-square, Birkenhead.

BOOTLE BOROUGH HOSPITAL.—Junior House Surgeon. Salary £40 per annum, with board, lodging, washing, &c.

COUNTY BOROUGH OF SOUTHAMPTON.—Assistant to the Medical Officer of Health. Salary £150 per annum. Applications to the Town Clerk, Municipal Offices, Southampton.

DENTAL HOSPITAL OF LONDON, Leicester-square.—Assistant Dental Surgeon.

DEVON AND EXETER HOSPITAL, Exeter.—Assistant House Surgeon. Salary £140 per annum, with board and lodging, not including alcoholic liquors and aerated waters.

DISTRICT INFIRMARY, Ashton-under-Lyne.—House Surgeon. Salary £100 a year with board and lodging.

GENERAL HOSPITAL, Birmingham.—Surgical Casualty Officer for one year. Salary £50 per annum, non-resident.

GENERAL HOSPITAL, Nottingham.—Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in hospital provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Junior Resident Medical Officer for six months. Salary at the rate of £25 per annum, with board, lodging, and washing.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT, 26, Margaret-street, Cavendish-square, London, W.—Physician in Ordinary. Also Visiting Physician.

LONDON SCHOOL OF MEDICINE FOR WOMEN, 30, Handel-street, Brunswick-square, W.C.—Demonstrator of Physiology. Salary £30 per annum.

MANCHESTER ROYAL EYE HOSPITAL.—House Surgeon. Salary £70 per annum, with residence, board, and washing.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury, London.—Senior House Physician. Salary £100, with board and apartments.

NEWPORT AND MONMOUTHSHIRE HOSPITAL, Newport, Mon.—House Surgeon. Salary £100 per annum, with board and residence (no stimulants provided).

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board and residence.

ROXBURGH DISTRICT ASYLUM, Melrose.—Assistant Medical Officer. Salary £100 a year, with board, rooms, attendance, and washing.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road, Brighton.—House Surgeon. Salary £80 per annum, with board, lodging, and washing. No stimulants.

ROYAL FREE HOSPITAL, Gray's-inn-road, London.—Assistant Physician for Out-patients.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House Surgeon. Board, residence, and laundry provided.

ST. LUKE'S HOSPITAL, LONDON, S.E.—Clinical Assistant for six months. Board and residence provided.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—House Surgeon. Salary £50 per annum, with board and lodging.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington.—Curator of Museum and Demonstrator of Pathology.

ST. SAVIOUR'S UNION, Surrey.—Medical Superintendent and Second Assistant Medical Officer at the Infirmary, East Dulwich-grove, S.E. The salary of the Medical Superintendent at the rate of £400 per annum, with unfurnished house, coals, gas, and water, and that of the Second Assistant Medical Officer at the rate of £80 per annum, with furnished apartments, board, and washing. Subject to an annual percentage deduction from the salaries in accordance with the provisions of the Poor-law Officers' Superannuation Act. Applications to the Clerk, Union Offices, John-street, Blackfriars-road, S.E.

UNIVERSITY COLLEGE, BRISTOL, FACULTY OF MEDICINE.—Medical Tutor, Stipend £125 per annum.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE, CARDIFF, MEDICAL SCHOOL.—Demonstrator in Physiology for the Summer Session.

VICTORIA HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Edinburgh.—Resident Physician. Board and lodging are provided, and an allowance for conveyance at the rate of £24 per annum. Also non-resident Medical Officer for Out-patients. Salary at the rate of £60 per annum. The appointments for six months. Applications to Messrs. Wallace and Guthrie, W.S., 1, North Charlotte-street, Edinburgh, Hon. Secs.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—House Surgeon, unmarried. Salary £60 a year, with board and residence.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £80 per annum, with board and residence in the hospital.

WEST SUSSEX COUNTY ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 a year, with board, lodging, washing, and attendance. Applications to the Clerk to the Committee, West Pallant, Chichester.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for twelve months. Salary £60 per annum, with rooms, board, and washing.

WONFORD HOUSE HOSPITAL FOR THE INSANE, near Exeter.—Assistant Medical Officer. Salary £150 per annum, with furnished apartments, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ATKINSON.—On March 15th, at Whitefriars, Settle, Yorkshire, the wife of Francis Edward Atkinson, Medical Officer of Health, Craven Combined District, of a son.

DALDY.—On March 15th, at Springfield-road, Kingston-on-Thames, the wife of Arthur M. Daldy, M.D., F.R.C.S., of a daughter.

KENNEDY.—On March 14th, 1897, at 113, Balaam-street, Plaistow, E., the wife of Angus E. Kennedy, L.R.C.P., M.R.C.S., L.S.A., of a daughter.

NEWINGTON.—On March 9th, at The Grange, Edenbridge, Kent, the wife of Charles W. H. Newington, M.R.C.S., L.S.A., L.R.C.P., of a son.

O'BRIEN.—On Feb. 25th, the wife of Jos. O'Brien, L.R.C.P., L.R.C.S., Edin., L.F.P.S. Glasg., J.P., The Cottage, Barronstown, Dundalk, Ireland, of a daughter.

WHICHER.—On March 16th, at Inverness, N.B., the wife of J. C. F. Whicher, Staff Surgeon, Royal Navy, H.M.S. *Briton*, of a daughter, prematurely.

MARRIAGES.

HARRIS—WINCH.—On March 13th, at Holy Trinity, Lincoln's-inn-fields, W.C., John William Harris, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to Emily Edith, youngest daughter of the late William Haffenden Winch, of Cranbrook, Kent.

JEKYLL—LANGDON.—On March 11th, at Holy Trinity Church, Barnstaple, North Devon, Lewis Nugent Jekyll, M.R.C.S., L.R.C.P. Lond., of Leytonstone, Essex, to Agnes Maria, youngest daughter of the late William Langdon, of Northmoiton, North Devon.

DEATH.

BRAID.—On the 10th inst., suddenly, at his residence, Ivydene, Dorking, Charles Braid, M.D., eldest son of the late James Braid, M.D., of Burgess-hill.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (27th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (22nd).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. H. Cripps: Three Cases of Intestinal Anastomosis, two of them involving Double Resection.—Dr. T. D. Savill: Senile Decay, its Pathology and Treatment (illustrated by cases and by the projection microscope.)

TUESDAY (23rd).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Surg.-Capt. C. W. Duggan (communicated by Dr. G. Thin): The Parasite of Malaria in the Fevers of Sierra Leone.—Dr. S. West: Pulsating Empyema (Empyema Pulsans).

WEDNESDAY (24th).—HUNTERIAN SOCIETY.—8.30 P.M. Mr. W. Rawes: Mental Disorders of the Climacteric Period.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—5 P.M. Cases will be shown by Mr. Jackson Clarke, Dr. Walsh, Dr. Savill, Dr. Abraham, and others.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8 P.M. Adjourned Discussion on Retro-ocular Neuritis. Speakers—The President, Mr. Jessop, Dr. Silcock, Mr. Holmes Spicer, Dr. Macnaughton-Jones, Dr. R. Russell, and and Mr. A. Frost.

FRIDAY (26th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. W. Pasteur: An Epidemic of Infantile Paralysis among Children of the same Family.—Mr. C. B. Lockwood: Case of Malignant Stricture of the Œsophagus treated with Symond's Tube, Safety String swallowed, Gastrostomy.—Dr. J. W. Washbourn and Mr. W. A. Lane: Case of Cerebral Tumour, Successful Removal.—Mr. R. Barwell: Remarkable Features in a Case of Extravasation of Urine.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (22nd).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. C. Stewart: Joints and Flexible Bonds of Union in Plants and Animals.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Prof. W. H. Corfield: Water Supply, Drinking Water, Pollution of Water.

TUESDAY (23rd).—ROYAL COLLEGE OF PHYSICIANS—5 P.M. Dr. A. P. Luff: The Chemistry and Pathology of Gout. (Goulstonian Lecture.)

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Diagnosis and Treatment of the dangerous Sequelæ of Suppurative Inflammation of the Middle Ear.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: General Paralysis.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Urticaria.

ROYAL INSTITUTION.—3 P.M. Prof. A. D. Waller: Animal Electricity.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4 P.M. Dr. H. Campbell: Domonstration of Cases.

WEDNESDAY (24th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. C. Stewart: Joints and Flexible Bonds of Union in Plants and Animals.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Inspection and Demonstration of Disinfecting and Filtering Appliances at J. Defries and Sons, Limited, 147, Houndsditch, E.C.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Air.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Acland: Empyema.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Mansell Moullin: The Use of Pessaries in Flexions and Prolapse.

THURSDAY (25th).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. A. P. Luff: The Chemistry and Pathology of Gout. (Goulstonian Lecture.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Inspection and Demonstration at the Metropolitan Cattle Market, York-road, N.—8 P.M. Dr. W. A. Bond: Demonstration of Diseased Meat at the Parkes Museum.

ROYAL INSTITUTION.—3 P.M. Prof. W. B. Dawkins: The Relation of Geology to History.

FRIDAY (26th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. C. Stewart: Joints and Flexible Bonds of Union in Plants and Animals.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Typhoid Fever and Diphtheria.

ROYAL INSTITUTION.—9 P.M. Sir W. Turner: Early Man in Scotland.

SATURDAY (27th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Inspection and Demonstration at Harrison and Barber's Knacker Yard, Whitechapel.

ROYAL INSTITUTION.—3 P.M. Right Hon. Lord Rayleigh: Electricity and Electrical Vibrations.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

CIRRHOSIS OF THE LIVER IN CHILDREN.

To the Editors of THE LANCET.

SIRS,—I should be glad if any of your readers could refer me to literature on the subject of cirrhosis of the liver in children. I have recently met with a typical case of "hob-nailed" liver in a negro child of seven years, and I am constantly seeing cases of ascites in young native children, most of which I am certain are associated with hepatic contraction.

I am, Sirs, yours truly,

W. M. ELLIOTT, M.D. R.U.I.

Salt Pond, Gold Coast, Feb. 9th, 1897.

SUPERFŒTATION.

To the Editors of THE LANCET.

SIRS,—I am allowed by the kindness of Dr. J. Hutchinson Swanton to publish this case. I attended a woman in her confinement on Jan. 6th. Her abdominal tumour was abnormally large, the membranes were intact, and I could feel two well developed feet through them. Pains being strong and the os uteri well open, I ruptured and much liquor amnii escaped. On a second examination I found another bag of membrane presenting. I ruptured this also and felt a soft mass which was speedily expelled, and proved to be the head of a fœtus apparently about three intra uterine months of age. From its navel projected an exomphalos about as large as an orange containing intestine. The second child was then rapidly delivered, and proved a large, healthy, and lusty male of full term. There were then expelled two distinct and separate amnia and placentæ to which distinct funes were attached. The small fœtus had been dead apparently about three weeks, and I am surprised that labour did not set in earlier, but the mother stated that she had been in pain about three weeks. It appears to me probable that a second ovum was fertilised in utero after the first had been attached five months. The mother is very strong and the uterus and os uteri were exceptionally large. I cannot conceive the fœtus in question to have been dead six months in utero, as the skin was not macerated and the general appearance seemed to indicate that it had not long been dead. I am, Sirs, yours faithfully,

Edmonton, Middlesex, Feb. 10th, 1897. EDWARD C. B. IBOTSON.

*** The overwhelming probability is that the two ova were fertilised at the same time, and that the one died at the end of three months and was retained till term.—ED. L.

Ethics.—Our attention has been called to the communication in question. We agree with our correspondent.

ALLEGED REDUCTION OF CONSULTANTS' FEES IN LONDON.

THE *Medical Record* of New York of Feb. 20th contains a paragraph to the effect that it is regarded as undignified for a consultant in the West-end of London to accept any less fee than two guineas, and that the result is that all the fees go to those of established reputation. Our contemporary adds that it is now proposed to recognise as strictly professional the acceptance of reduced fees even as low as 7*s.* We hope this statement will not be taken too seriously. Certainly we are not aware of any valid foundation for it. No doubt the *amour propre* of high consultants leads them occasionally to take patients who could pay a sufficient but modest fee into their hospital as charitable patients rather than hand them over to a younger colleague who would only be too thankful for such a fee. This is a sore evil which needs only to be exposed to be remedied. It is a part of the great question of abuse of hospitals. But the reduction of consultants' fees to 7*s.* is not to be thought of. It is of a piece with sixpenny dispensaries, and should be resisted by every practitioner who respects himself and his profession. The two guineas fee of the established consultant is right enough. It is even to be wished that the more leading consultants would place a higher value on their services and so lead to a better distribution of work. But to reduce the consultants' fee to less than the traditional guinea when the nation is many times wealthier than when such a fee was established is to be unfaithful to the profession and its enormous responsibilities.

M.O.H.—The best plan is simply to wash the floor and woodwork with a 1 in 1000 solution and then with soap and water. Where washable papers are in use such a proceeding would not injure them in the least. A steam spray, as, for instance, that of Siegels, is also useful for applying corrosive sublimate solution, in which case it should be of 1 in 500 strength. There should be no risk attending the use of weak solutions such as these, but of course the stock should be kept out of the way. The L.G.B. soloids of corrosive sublimate (Messrs. Burroughs, Wellcome, and Co.) are very convenient.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—I shall feel much obliged if any of your readers can inform me of an institute where a patient of mine can be placed as a permanent resident. He is about thirty years of age, and though not quite imbecile requires careful watching; he is dirty in his habits. His means are small and his friends do not wish to be subjected to a greater expense than about £50 annually. I am, Sirs, yours truly,

March 15th, 1897. C. E. F.

Medical Officer to Her Majesty's Prisons.—The opinion of the Secretary of State is undoubtedly correct. The Fifth Section of 6 and 7 Will. IV. states unconditionally that a medical officer is not entitled to a fee for making a post-mortem examination or for giving evidence at an inquest. The coroner has the power of deciding where the inquest shall be held. The fact that the inquiry takes place away from the public institution in which deceased died does not entitle a medical man to claim a fee. If he incurs travelling expenses no doubt he would be granted remuneration therefor.

"MATERNAL IMPRESSION ON THE FŒTUS."

To the Editors of THE LANCET.

SIRS,—Observing some discussion on this subject in THE LANCET of March 6th, I venture to give you, out of many such coincidences or impressions which I have seen, the following:—Ten years ago I was called to a baby of eighteen months, whose little finger had been accidentally cut off cleanly at its base with a hatchet by the next youngest brother. Their mother was then a few weeks pregnant, and in spite of my encouragement made up her mind that her future infant would "have something the matter with its hands." On attending her at this confinement I had quite forgotten her fears, thinking at the time that I had allayed them, but her first question immediately on delivery proved to the contrary, and to my chagrin the child had a supernumerary ulnar digit on each hand. There was no family history of such additional fingers, but the woman on a previous occasion had been equally confident beforehand of a "bunch of grapes" which duly appeared as a nævus on the breast. Whatever may be the rationale of these cases, their frequency should make us very careful in the lying-in room not to scout the possibility of such sequence. I am, Sirs, yours faithfully,

Royal Exchange, March 8th, 1897. ROBERT J. COLENSO.

Disgusted.—It would not be wise to publish such a communication. Our correspondent will understand that a medical man must do his duty whatever the consequence, and the letter contains almost a warning to young men to abstain from a proper course of treatment lest misunderstanding should follow.

AN AGREEMENT TO REFUSE PAYMENT BY CONTRACT.

THE Medical Union of Condroz, in Belgium, is apparently better agreed with regard to the interests of its members than is usually the case in less sparsely inhabited districts. A very elaborate tariff has been drawn up giving the extra fee or milage for all villages and hamlets, and no member is permitted to arrange regular hours for consultation anywhere except at his own residence, or to make any special terms with insurance companies or provident clubs. The only reduction permitted is for attendance on paupers, and for such attendance the authorities will have to pay by the visit, which will be charged 25 per cent. less than a visit to an ordinary person.

Q.—These questions can only be answered for certain when a legal decision has shown the reading that the law courts are prepared to put upon the Act. In our opinion B.'s notification would not carry the fee.

J. P.—The statements have been refuted over and over again. But they will continue to be made over and over again, for the holders of these tenets are particularly *Kwanje* people.

THE PAYMENT OF FEES UNDER THE NOTIFICATION ACT.

To the Editors of THE LANCET.

DEAR SIRS,—Will you please notice enclosed in THE LANCET and give your opinion as to whether a practitioner must go down to the office. It is a loss of about two hours and a half to me going down for the notification fees due me. Surely the city M.O.H. could see that a cheque be sent me. And oblige Yours faithfully,

March 1st, 1897. R. R. RENTOUL.

*** We print Dr. Rentoul's enclosure below, and presume that the footnote authorising the payee to receive his money by deputy escaped Dr. Rentoul's observation.—ED. L.

[ENCLOSURE.]

CORPORATION OF LIVERPOOL.

Municipal Offices, Liverpool,
Treasurer's Office.

.....189

Sir,

You are requested to call at this Office to-morrow between 10-30 and 12 o'clock, to receive payment of your account.

Your obedient Servant,
J. E. A. ROGERS,
Treasurer.

M......

☞ This Circular to be produced at the time of payment, and if inconvenient for you to apply personally, you are requested to fill up and sign the following order:—

Please pay the Bearer, Mr......
.....*account, against the Corporation of Liverpool.*
.....

Sarum.—The terms of the agreement define, or should define, the position exactly. For a term of years a certain share was to accrue to the late owner's son. At the end of that period a new agreement must be made if the partnership is to continue, and the contracting parties must settle between them what the terms shall be for the future. Neither side can claim anything under the terms of an expired agreement, but if the agreement contains provisions for future arrangements, it has not expired. The point is obviously one for amicable arrangement.

"ANTISEPTIC MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—I fear Dr. Playfair cannot have read my letter, as had he done so he would not for the second time misquote me. I never said one word about 1 in 2000 of the perchloride of mercury as a disinfectant for the "hands." What I did say was "as a vaginal injection in normal labours, and intra-uterine where the hand, forceps, &c., have entered the uterus." As a matter of fact, I use 1 in 1000 for the hands and 1 in 1000 dissolved in glycerine as a lubricant for both hands and forceps. I have used the latter for years, and beyond a slight staining they have suffered no injury. When Dr. Playfair challenged Dr. Godson's able advocacy for the perchloride treatment we certainly expected something more scientifically definite than his statement that "sufficient creolin should be dropped into the water to be used to make it milky in appearance." Why does he not give us the strength, and, as Mr. R. L. Wood very properly asks, its bactericidal and spore-killing properties? We could then judge for ourselves as to the relative merits of both.

I am, Sirs, yours truly,

Ballincollig, March 15th, 1897. JAMES J. HARDING.

Mr. H. Mynors.—The dissemination of such cards is, of course, most regrettable, but only the bodies from whom the offender holds his degrees or diplomas can interfere with any proper *locus standi*.

AN IMPROVED REEL FOR THREAD.

MR. G. GILMORE STEVENS, of 27, Lochaber-street, Roath Park, Cardiff, has forwarded to us a new form of reel which deserves the attention of all workers with the needle. When a length of thread is taken from a reel it is more often cut off with the teeth than with the scissors, an objectionable practice, which, though it may be excused on the ground of convenience, is injurious to the front teeth and encourages the dangerous habit of holding small objects in the mouth. Mr. Stevens's invention saves the trouble of looking for the scissors and removes any excuse for biting off thread. It is very simple, consisting merely of a single steel edge about a quarter of an inch long, sunk in a notch cut in one of the ends of the reel, and the piece of thread that has been unwound is at once cut off when pulled against it.

B. B. would like information as to the best books to read in preparation for the M.D. Durham examination for practitioners of fifteen years' standing.

"DR. RENTOUL'S EXPENSES FUND."—FOURTH LIST.

To the Editors of THE LANCET.

SIRS,—The total amount to date is £92 17*s.* I now ask with confidence that those supporters of Dr. Rentoul whose support is not limited to words (which are cheap) should at once forward their subscriptions. If this list were some testimonial to a rich and highly placed member of the profession who did not need it, I suppose we should have had to get clerical assistance in acknowledging all the donations. As it is, however, a question of repaying a hardworking practitioner money spent in furthering our interests, it takes nearly three months to raise a paltry sum of £92. This is indeed gratitude, and will doubtless act as an incentive to other men to spend time, money, and health in medico-political work.

I am, Sirs, yours faithfully,

Gateshead, March 16th, 1897. ALFRED COX, M.B. Durh., Hon. Sec.

	£	*s.*	*d.*
F. Bell, Preston...	0	5	0
J. Cleland Clarke, Farnworth	0	10	0
A. Cohen, Maida Vale, W.	0	5	0
Arthur Dowling, Haydock, St. Helens	0	5	0
Richard Ellis, Newcastle-on-Tyne	0	10	6
H. E. Fellowes, Heaton, Newcastle-on-Tyne ...	0	2	6
A. P. Fiddian, Cardiff ...	0	2	6
G. Fyfe, Middlesbrough...	0	2	6
G. Govan, Cockermouth	0	5	0
J. Hamilton, Chelsea, S.W.	0	2	6
A. Higginson, Bolton ...	0	10	6
John Humphreys, Trawsfynydd, Merioneth ...	0	10	0
D. Williams Jones, Inkberrow	0	2	6
C. G. B. Kapp, Gateshead	0	5	0
J. Law, Wrekenton, Gateshead	0	5	0
John H. Lightbody, Nantwich	1	1	0
A. Meeson, Liverpool ...	0	5	0
BrendonMacCarthy, Liverpool	0	10	0
Walter Maine, Clacton-on-Sea	0	3	6
Donald Morison, Beeford, Hull	0	5	6
Messrs. Ormrod and Dudgeon, Workington	1	1	0
Arthur H. Rideal, Brooks's Bar, Manchester (Midwives Opposition Expenses)	0	10	6
J. Robinson, Dunscar, Bolton	0	5	0
Rochdale and District Medical Society (per James Melvin)	5	0	0
W. R. Sergeant, Gateshead	0	2	6
Chearnley Smith, Great Harwood	0	5	0
Swansea Medical Society (per J. Kynaston Couch)	1	1	0
D. E. Thomas, Newport, Mon.	0	2	6
S. Walker, Middlesbrough	0	10	0

W. H.—The Local Government Board is not concerned with the qualifications further than that they must be such as entitle their Poor-law officers to be registered as qualified to practise both medicine and surgery. The scheme granting the conjoint diplomas of the Royal College of Surgeons in Ireland and the Apothecaries Hall of Ireland was not closed for new entries until June 30th, 1895, students entered before that date being allowed to complete their examinations.

"THE DOSE OF IPECACUANHA."

To the Editors of THE LANCET.

SIRS,—It may be of interest, in connection with Dr. Balmanno Squire's letter which appeared in THE LANCET of March 13th respecting ipecacuanha wine, to mention that the sample was made from Brazilian root in strict accordance with the pharmacopœial directions, and that the wine contained 0·085 per cent. of alkaloids.

We are, Sirs, yours truly,

Oxford-street, W., March 15th, 1897. JOHN BELL AND CO.

Mr. Robert Reynolds.—To notice these people is only to further advertise them. Those who are deceived by such trash do not read our columns.

MEDICAL FEES IN RURAL FRANCE IN THE LAST CENTURY.

ACCORDING to a paper in the *Journal des Sciences Médicales de Lille* some items are given of the fees obtained by a medical man at Elincourt in the time of Louis XVI. A visit near was 5 sous, but 10 sous if the patient lived in a village at some distance. Persons of distinction, too, had to pay more; thus the prior of a monastery was charged 30 sous every time his wound was dressed, and as this was done twice a day for some five weeks and once daily for fifteen weeks more his reverence must have proved a valuable patient as practice went then. Bleeding was charged 5 sous, but 10 if on the foot, extraction of a tooth was 5 sous, reduction of the clavicle 3 livres, and setting a broken arm 30 livres! *Le Scalpel* publishes some similar information obtained from a medical man whose great-grandparents took their child to a Lille physician, who, being the attendant of the prince bishop, had a very large practice. He stripped the child and examined him most carefully, but all he asked was 5 sous.

A Subscriber of Forty Years appears to us to make out a very good case for superannuation. His medical adviser clearly tells him not to do the work that his duties must entail upon him.

A KNOWLEDGE OF THE ODDS.

WE commend the following incident to the notice of Mr. Hawke as another instance of the evils of a knowledge of the "odds." Scene: the ward of a metropolitan hospital; in one bed is lying a member of the sporting fraternity; to him enter a surgeon, attended by fifteen eager and obsequious dressers. Surgeon, to the dresser of the case, after an able and exhaustive account of the symptoms: "Now, Mr. Smith, would you operate on this case?" Mr. Smith (dresser): "No, sir, I should not." "And you, and you, and you?" indicating the others. Unanimous negative. "Well, gentlemen, you are all quite wrong," says the surgeon, with conscious pride, "I intend to operate." Voice from the bed: "No you don't, gov'nor! Fifteen to one agin it—no chaunce. 'Ere, I say, m ss, give me my clothes; I'm orf."

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 18th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo	Maximum Temp Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 12	29·58	S.W.	44	42	97	51	40	...	Hazy
,, 13	29·53	N.E.	41	39	68	49	38	0·01	Raining
,, 14	29·51	N.E.	43	42	52	47	40	0·29	Cloudy
,, 15	29·31	S.W.	45	43	69	49	41	0·10	Cloudy
,, 16	29·42	S.W.	45	44	56	49	41	0·05	Raining
,, 17	29·50	S.W.	49	47	77	54	44	0·26	Cloudy
,, 18	29·47	S.W.	47	45	89	51	45	...	Stormy

During the week marked copies of the following newspapers have been received:—*Manchester Guardian, Umpire, Leicester Post, Temperance Chronicle, South Wales Daily News, Blackpool Gazette, Aldershot News, Times of India, Warwickshire Times, Exeter Flying Post, Scotsman, Pioneer Mail, Birmingham Post, Glasgow Herald, Leicester Advertiser, Buxton Advertiser, Manchester Courier, Sussex Daily News, Wolverhampton Chronicle, Blackburn Standard, Accrington Observer, Newcastle Leader, Rochdale Observer, Architect, Worcester Herald, Dundee Courier, Leighton Independent, Liverpool Daily Post, Builder, Windsor Chronicle, Kent Messenger, Portsmouth Times, Wigan Examiner, Midland Counties Express, Northampton Mercury, Hampshire Independent, Bury Guardian, Bristol Mercury, Sydney Morning Herald, Western Morning News, Yorkshire Post, Leeds Mercury, The Sun, Sanitary Record, Cork Examiner, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Redditch Indicator, City Press, Hertfordshire Mercury, Reading Mercury, Mining Journal, Surrey Advertiser, Local Government Journal, Derbyshire Courier, Brighton Herald, Madras Times, Auckland Chronicle, Southampton Observer, Manchester Weekly Times, West Middlesex Herald, Hornsea Gazette, Glamorgan Free Press, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Prof. C. Allbutt, Cambridge; Messrs. Armour and Co., Lond.; Advocate, Lond.; Messrs. Arnold and Sons, Lond.; Abstainers' and General Insurance Co., Birmingham, Sec. of; A. Z., Lond.;

B.—Mr. T. T. Brammer, Sheffield; Miss F. N. Boyd, Lond.; Mr. R. Barwell, Lond.; Mr. W. K. Brewer, Lond.; Messrs. J. Bell and Co., Lond.; Dr. T. Lauder Brunton, Lond.; Messrs. P. B. Burgoyne and Co., Lond.; Mr. W. Bottomley, Ashton-under-Lyne; Messrs. Burroughs, Wellcome, and Co., Lond.; Dr. H. C. Bastian, Lond.; Bury Disp. Hosp., Sec. of; Birkenhead Union, Clerk of; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mrs. A. Broster, Weston-super-Mare; Mr. A. E. Broster, Wirksworth; Dr. J. B. Brierley, Old Trafford; Mr. A. W. Blyth, Lond.; Bradford Medical Society, Reporter of; Bristol Medico-Chirurgical Society, Hon. Sec. of; Mr. R. Boyd, Liverpool; Bethnal Green Free Library, Committee of; British-American Ball Nozzle Co., Lond.

C.—Mr. Colin G. Campbell, Saddleworth; Messrs. T. Christy and Co., Lond.; Mr. S. Coleridge, Lond.; Mr. J. Cockram, Richmond; Cornwall County Council, Truro, Chairman of; Dr. A. V. Clarke, Leicester; Mr. E. B. Chamberlain, Totnes; Cabinet Maker, Lond.; Messrs. Crossley, Moir, and Co., Lond.; Carlton, Lond.

D.—Mr. A. Duke, Cheltenham; Dr. L. Drage, Hatfield; Devon and Exeter Hosp., Exeter, Sec. of; Dr. D. Dummond, Newcastle-on-Tyne; Mr. J. Devine, Greenock; Dr. W. Lee Dickinson, Lond.

E.—Dr. L. Elkind, Lond.; Esmond Cycle Saddle Co., Lond., Sec. of; East Devon County School, Sampford Peverill, Headmaster of; Dr. E. Elsmere, Child Okeford.

F.—Dr. R. H. Fox, Lond.; Factory Girls' Country Holiday Fund, Lond., Hon. Sec. of.

G.—Dr. L. G. Guthrie, Lond.; Miss E. Gosham, Kelvedon; General Medical Council, Lond.; Dr. W. J. Gow, Lond.; Mr. H. B. Gardner, Lond.; Dr. A. Galt, Glasg.; Gamma, Lond.; Guest Hosp., Dudley, Sec. of.

H.—Mr. A. W. Hughes, Cardiff; Dr. V. D. Harris, Lond.; Surg.-Capt. M. P. Holt, Deolali, India; Mr. J. T. Hislop, Hampsthwaite; Dr. Hardwich, Charing; Hospital Reform Assn., Cardiff, Hon. Sec. of; Hort, Mickleton Campden; Heigham Hall, Norwich, Proprietor of; Mr. G. Hatton, Southport; Mr. C. Heneage, Eastbourne; Mr. H. Hillyer, Pen-y-cwm, R.S.O., South Wales; Mr. J. Heywood, Manchester.

I.—Messrs. Ingram and Royle, Lond.; *International Medical Magazine*, Philadelphia, U.S.A., Publisher of; Ickringill's Patent Hygienic and Elastic Cloth Syndicate, Keighley, Sec. of.

J.—Dr. S. Jex-Blake, Edin.; Mr. A. E. Joscelyne, Greenwich; Mr. W. T. Jones, Lond.

K.—Mr. E. Knight, Lond.; Mr. B. Kühn, Lond.; Dr. H. W. King, Chester; Messrs. J. B. Keene and Co., Bath.

L.—Mr. J. H. Lapthorn, Manchester; Dr. A. P. Luff, Lond.; Messrs. Longmans, Green, and Co., Lond.; Mr. E. J. Line, Isleworth; Dr. T. Laird, Heywood; Dr. J. A. Lindsay, Belfast; Dr. V. W. Low, Staines.

M.—Dr. Moore, Spondon; Messrs. Mullock and Sons, Newport, Mon.; Messrs. Maple and Co., Lond.; Mr. S. B. Mason, Pontypool; Messrs. Mulloch and Sons, Lond.; Maltine Manufacturing Co., Lond.; Midland Railway, Lond., Sec. of; Mr. H. Mynors, Lond.; Mr. W. F. MacDonogh, Twickenham; Medical Officer of Health, Greenock; Dr. J. Murphy, Sunderland; Minnesota State Board of Health, Minnesota, U.S.A., Sec. of; Mr. H. Milton, Venice.

N.—National Telephone Co., Lond.; National Typewriter Exchange Co., Lond., Manager of; Nursery Aid Society, Bristol; Dr. J. Niven, Manchester.

O.—Mr. F. A. Osborn, Dover; Mrs. M. Tufnell Oakes, Killkee, co. Clare; Messrs. Oppenheimer, Son, and Co., Lond., Director of; Mr. W. H. Owen, Melbourne; Dr. T. Oliver, Newcastle-on-Tyne.

P.—Mr. Y. J. Pentland, Edin.; Mr. C. S. Prideaux, Dorchester; Pathological Society of Manchester, Secretary of; Mr. A. E. Palmer, Loughborough; Petroleum Lighting Syndicate, Lond.; Rev. R. Palmer, Ashford.

R.—Dr. J. D. Rawlings, Lond.; Dr. A. W. Russell, Glasg.; Dr. F. Rees, Wigan; Royal Aquarium, Lond., Sec. of; Messrs. Richardson Bros. and Co., Liverpool; Messrs. Roger and Chermoiz, Paris; Dr. H. D. Rolleston, Lond.; Royal National Pension Fund for Nurses, Lond., Sec. of; Dr. J. Ramage, Lond.; Royal Meteorological Society, Lond., Asst. Sec. of; Royal Hospital for Diseases of the Chest, Lond., Sec. of; Roxburgh District Asylum, House Steward.

S.—Mr. H. J. Stiles, Edin.; Dr. R. H. Shaw, Brighton; St. John Ambulance Association, Lond., Chief Sec. of; Mr. H. Lionel Smith, Nondweni, N'Qutu, Zululand; Messrs Street Bros., Lond.; *Science Progress*, Lond., Editor of; Messrs. Street and Co., Lond.; *St. James's Budget*, Lond., Editor of, Southampton County Borough, Town Clerk of, Security Co., Lond., General Manager of; *The Scientific American*, New York, U.S.A., Proprietors of; Società Medico-Chirurgica di Bologna, Sec. of; Mr. W. H. R. Stewart, Lond.; Mr. J. Startin, Lond.; Sarum, Salisbury; Dr. J. G. Smith, Bristol; Messrs. Stewart and Co., Lond.

T.—Rev. A. Tooth, Woodside; Mr. W. Thomas, Llanelly; Mr. W. P. Thornton, Canterbury; Dr. J. Teschner, New York City; Town Clerk's Office, Hastings, Clerk of; Mr. J. Tweedy, Lond.; Throat Hosp., Golden-square, Sec. of.

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